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CHESTERFIELD  
COUNTY,  
VIRGINIA

# ECONOMIC ANALYSIS



Chesterfield County Planning Department | August 2014

# INTRODUCTION

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The following report seeks to provide a thorough analysis of the various industries which make up Chesterfield County's economic base. Such an analysis fosters a better understanding of emerging trends within the local economy, including employment projections and core industries. As a result, the industrial composition of the county can be taken into account when updating and amending the county's Comprehensive Plan, which was adopted by the Chesterfield County Board of Supervisors in 2012.

The following analysis was primarily conducted using employment and wage data for each given industry. The report begins with an overview of the county's industrial sectors, identifying emerging trends at the sectoral level before moving into a detailed report for each individual sector.

The data for this report comes, almost exclusively, from the Virginia Workforce Connection service (specifically, the Virginia Labor Market Information service) and links established therein. The most recent available data is included in the report, and is over a year old due to the detailed nature of data reporting. Data for some sectors (i.e. the Mining, Quarrying, and Oil and Gas Extraction sector) is missing due to non-disclosure and other reporting problems. This report focuses on employment in the private sector, so Public Administration businesses and employers, though important to the local economy, are not included in any of the sectors analyzed.

This report should be expanded as additional data sets and figures become available to the general public. This report may be used in conjunction with, and indeed expands upon, data collected in the *Chesterfield County Business Report* in order for the reader to better understand the dynamics of Chesterfield County's economy. For more information on this and other reports prepared by the Planning Department, visit [www.chesterfield.gov/plan](http://www.chesterfield.gov/plan).

This report relies on the North American Industry Classification System (NAICS) for industry data reporting. A list of abbreviations used throughout the report for the 2-digit sector-level industry names can be found in the Data Sources & Methodology section at the end of this report.

This report focuses in on a variety of economic analysis tools, location quotient and shift-share analyses. Definitions of each of these tools, as well as some of their limitations, are listed in the Data Sources & Methodology section at the end of this report.

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### Establishment Trends

Chesterfield County's economy is diverse. The county is home to over 7,500 establishments, ranging in size and scope from agricultural to heavy manufacturing. Over 17 percent of these businesses were in the Health Care and Social Assistance sector followed by the Professional, Scientific and Technical Services sector at just over 12 percent. Management of Companies and Enterprises; Agriculture, Forestry, Fishing and Hunting; and the Utilities sectors each make up less than one percent of the county's businesses. The Health Care and Social Assistance sector added 126 establishments from 2012-2013 (an increase of 10 percent), and experienced the largest increase in average number of establishments from 2012-2013. Conversely, the Construction sector experienced a net loss of 36 establishments (or a loss of four percent) during the same period, which represents the greatest loss in average number of establishments for a sector.

Figure 1 below compares the average number of establishments within each industry as reported by the Virginia Employment Commission Quarterly Census of Employment and Wages.

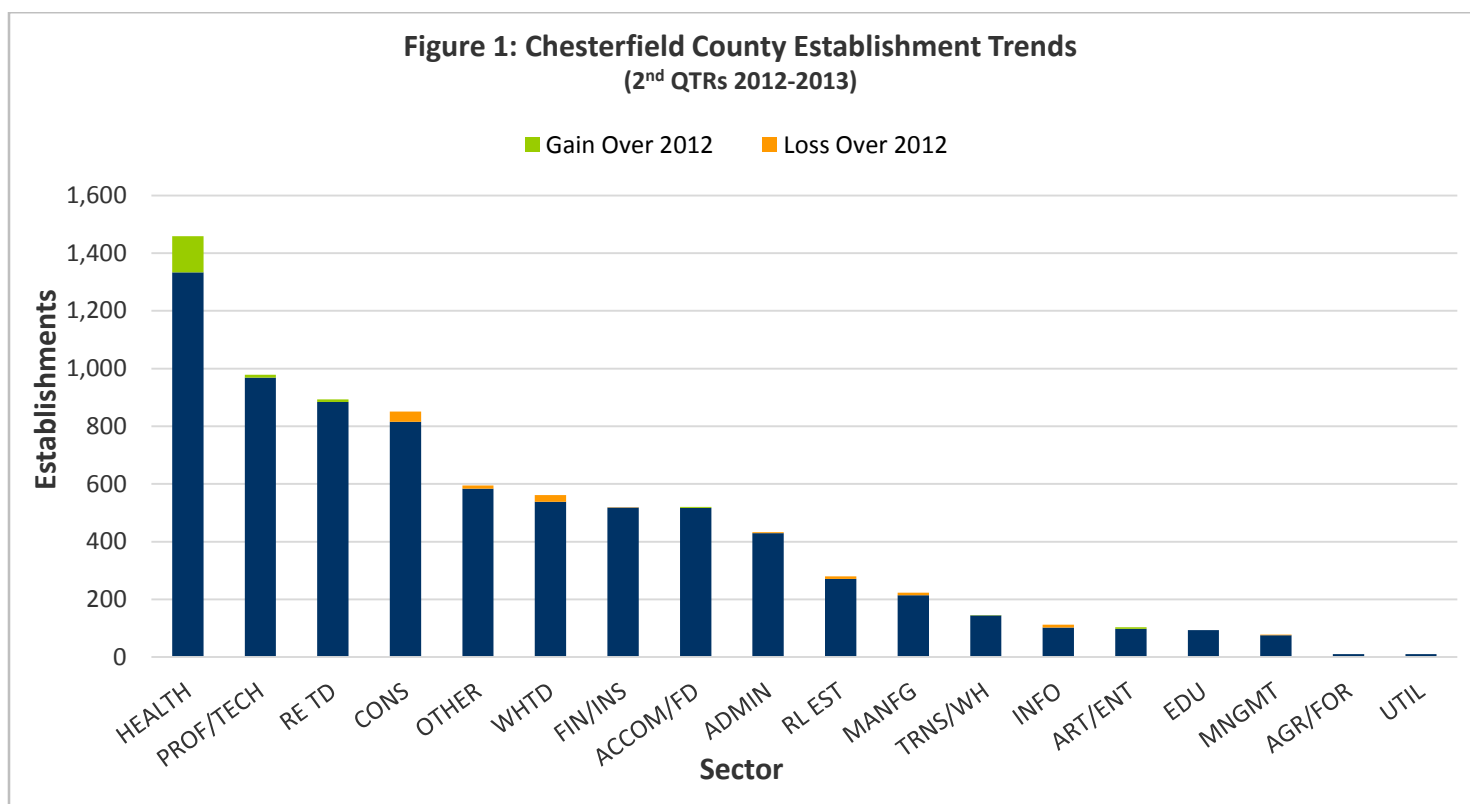


Table 1 (following page) further examines establishment and employment trends within Chesterfield County through the analysis of the county's 25 largest employers as broken down by industry, rank, and size code. It is important to note that the top 10 employment industries for the region are concentrated in the following five sectors:

- Health Care & Social Assistance
- Manufacturing
- Transportation & Warehousing
- Retail Trade
- Finance and Insurance

**Table 1: Chesterfield County Top 25 Employers, 2<sup>nd</sup> QTR 2013\***

Rank	Employer	Industry	Size Code	Rank 2nd QTR 2010
1	HCA Virginia Health System	Hospitals	9	7
2	E.I. DuPont De Nemours Company	Chemical Manufacturing	9	4
3	U.P.S.	Couriers and Messengers	9	6
4	Wal Mart	General Merchandise Stores	9	5
5	Hill Phoenix	Machinery Manufacturing	9	8
6	Amazon Com KYDC Inc.	Nonstore Retailers	9	NA
7	Kroger	Food and Beverage Stores	9	12
8	Bon Secours Richmond Health System	Hospitals	8	11
9	Capital One Bank	Credit Intermediation and Related Activities	8	16
10	Martin's Food Market <sup>+</sup>	Food and Beverage Stores	8	9
11	Integrity Staffing Solutions	Administrative and Support Services	8	NA
12	Food Lion	Food and Beverage Stores	8	13
13	ABB Alstom Power, Inc.	Fabricated Metal Product Manufacturing	8	15
14	Honeywell International, Inc.	Chemical Manufacturing	8	22
15	Atlantic Constructors Inc.	Construction of Buildings	8	20
16	YMCA	Religious, Grantmaking, Civic, Professional, and Similar Organizations	8	31
17	Dominion Virginia Power	Utilities	8	33
18	Northrop Grumman Corporation	Computer and Electronic Product Manufacturing	8	24
19	Lowes' Home Centers, Inc.	Building Material and Garden Equipment and Supplies Dealers	8	27
20	Interpsan Inc.	Administrative and Support Services	8	18
21	IBM Corporation	Merchant Wholesalers, Durable Goods	7	21
22	Target Corp	General Merchandise Stores	7	26
23	Travelers Property Casualty	Insurance Carriers and Related Activities	7	17
24	Call Pro LLC	Administrative and Support Services	7	NA
25	Real Time Staffing Services Inc.	Administrative and Support Services	7	NA

**Size Code:**

09: 1,000+ Employees

08: 500-999 Employees

07: 250-499 Employees

NA: Not Ranked

\* Not including local, state, and federal government employers

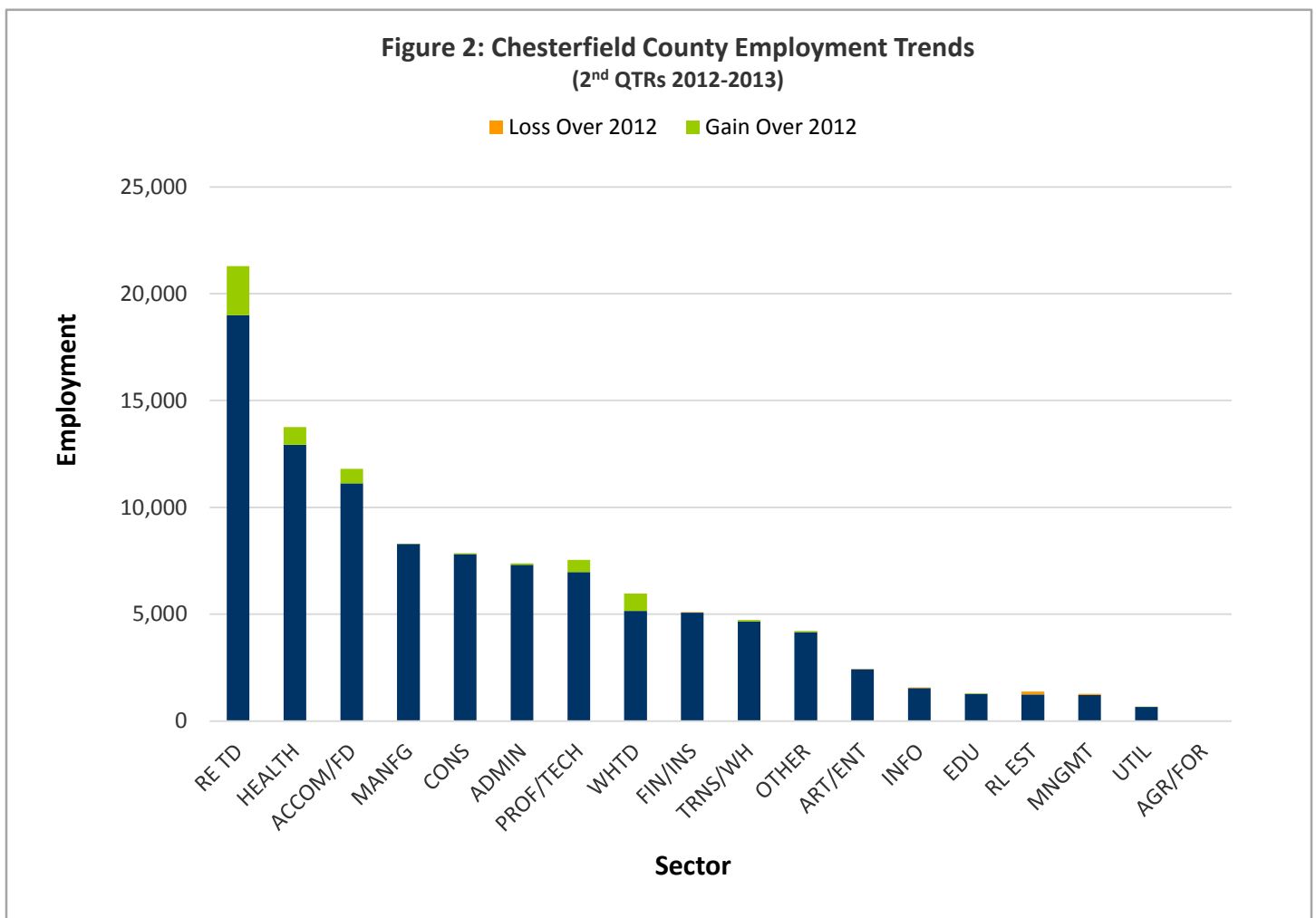
<sup>+</sup> Formerly Ukrop's

## Employment Trends

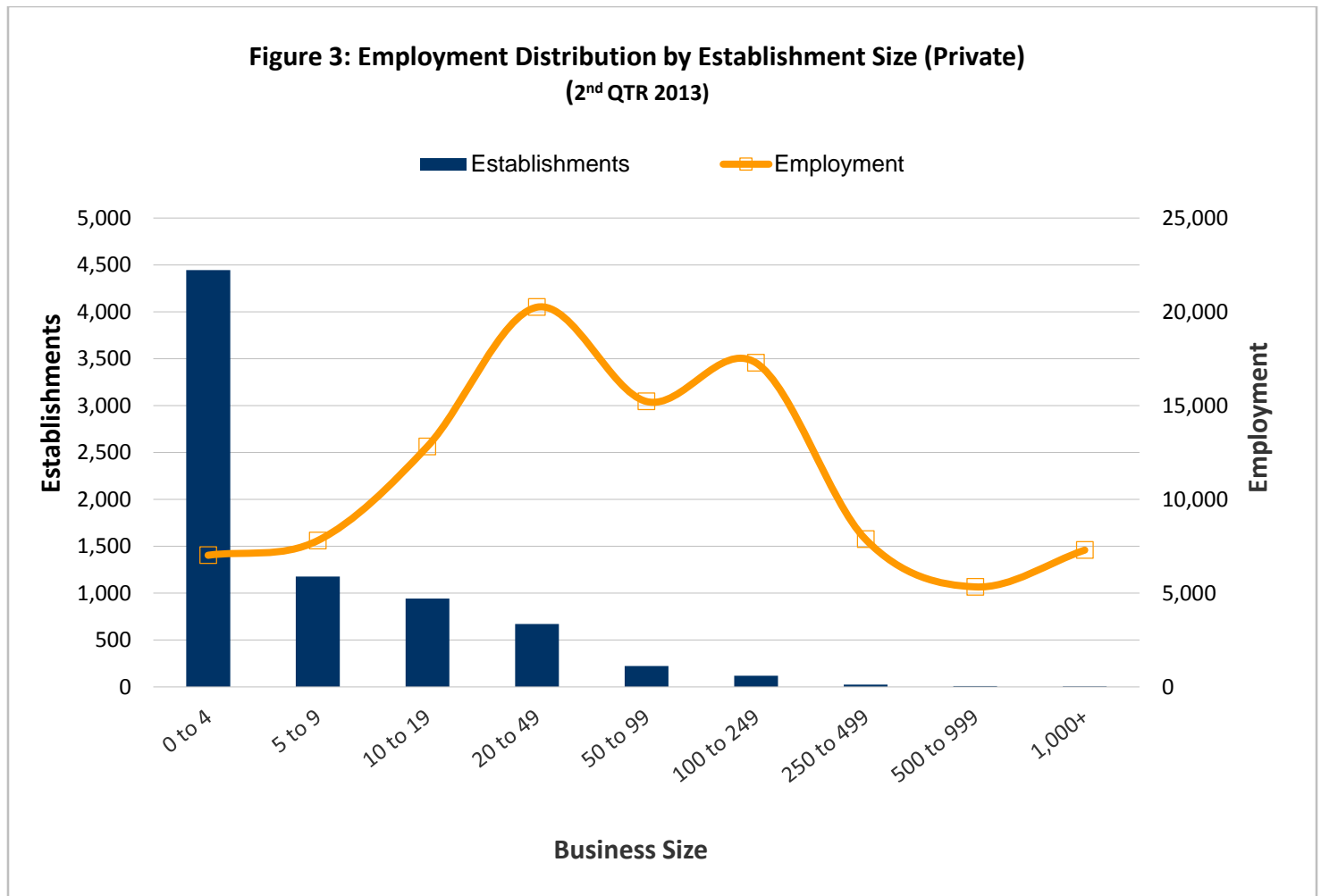
Industries in Chesterfield County employed 100,943 persons in the second quarter of 2013. Approximately 18 percent of these jobs were in the Retail Trade sector, followed by the Healthcare sector at 12 percent. The Utilities sector as well as the Agriculture, Forestry, Fishing, and Hunting sector contributed less than one percent of the county's jobs. All but six of the county's 18 sectors increased in employment from 2012 to 2013. The six industries which reported declines in employment are as follows:

- Finance and Insurance
- Arts, Entertainment, and Recreation
- Information
- Real Estate & Rental & Leasing
- Management
- Agriculture, Forestry, and Fishing

Figure 2 (below) depicts the employment trends for the county from 2012-2013 in greater detail.



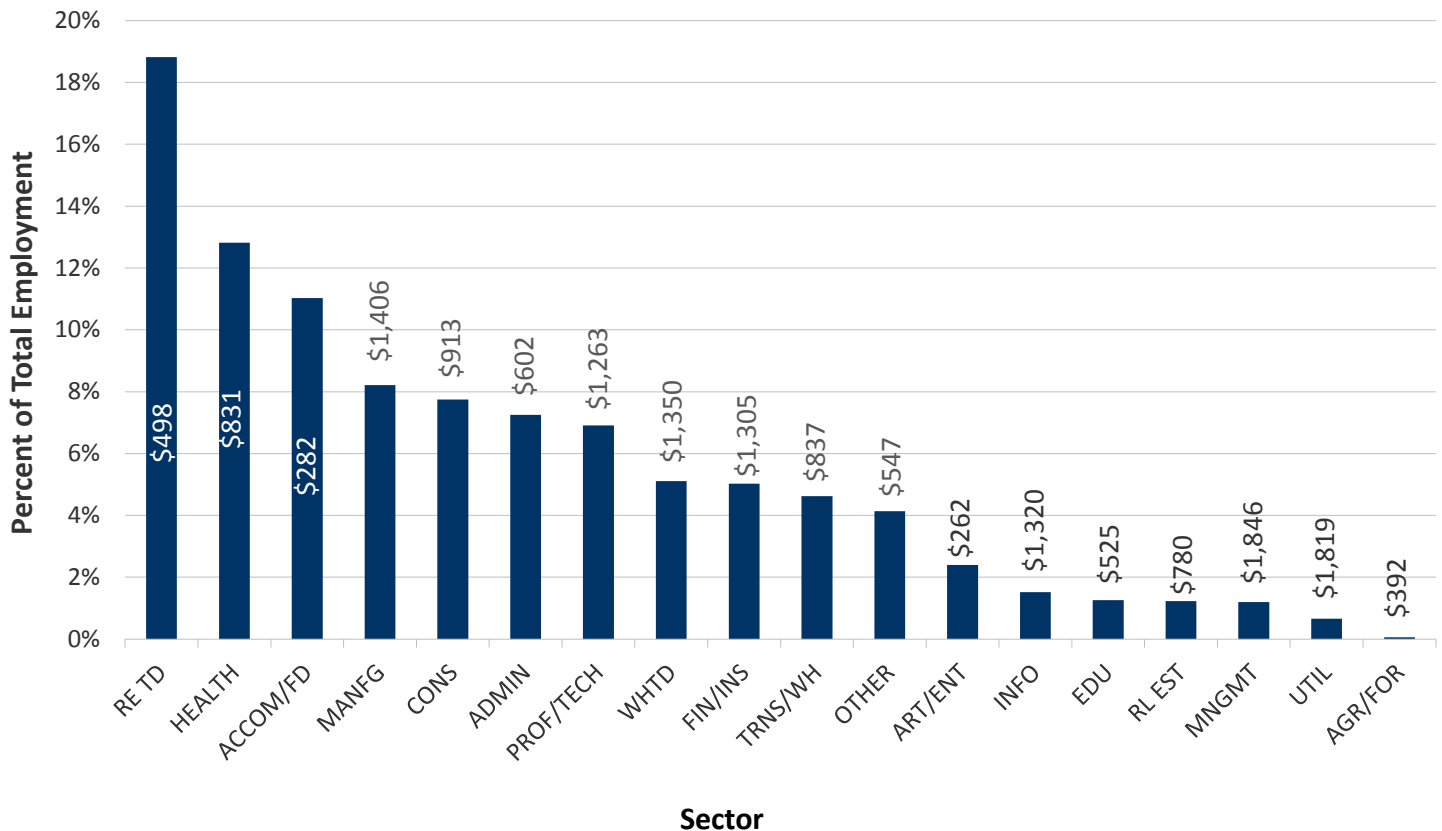
Over half (58 percent) of the businesses in Chesterfield County have four or fewer employees, and these establishments provide approximately seven percent of the county's total private employment. Establishments with 1,000 or more employees account for less than one percent of total establishments, yet they provide approximately seven percent of the county's total private employment. Approximately 74 percent of the county's businesses employ less than 10 persons, and these establishments provide approximately 15 percent of the county's jobs. Businesses employing 100 or more employees make up two percent of the county's establishments, but provide 38 percent of the county's jobs. Figure 3 below depicts these trends in greater detail.



## Wage Trends

The Management sector had the highest average weekly wage in Chesterfield during the second quarter of 2013 at \$1,846, which represents a seven percent increase from the second quarter of 2012. The Arts and Entertainment sector reported the lowest average weekly wage for the second quarter of 2013, at \$262, and experienced a two percent increase over the second quarter of 2012 wage of \$256. The top five highest paying sectors provided approximately 17 percent of the county's jobs, whereas the lowest five paying sectors provided approximately 34 percent. Figure 4 below depicts percent of total employment by industry along with the average weekly wage for employees in each sector as reported for the second quarter of 2013.

**Figure 4: Chesterfield County Percent of Total Employment & Average Weekly Wage  
(2<sup>nd</sup> QTR 2013)**





## AGRICULTURE, FORESTRY, FISHING, AND HUNTING SECTOR

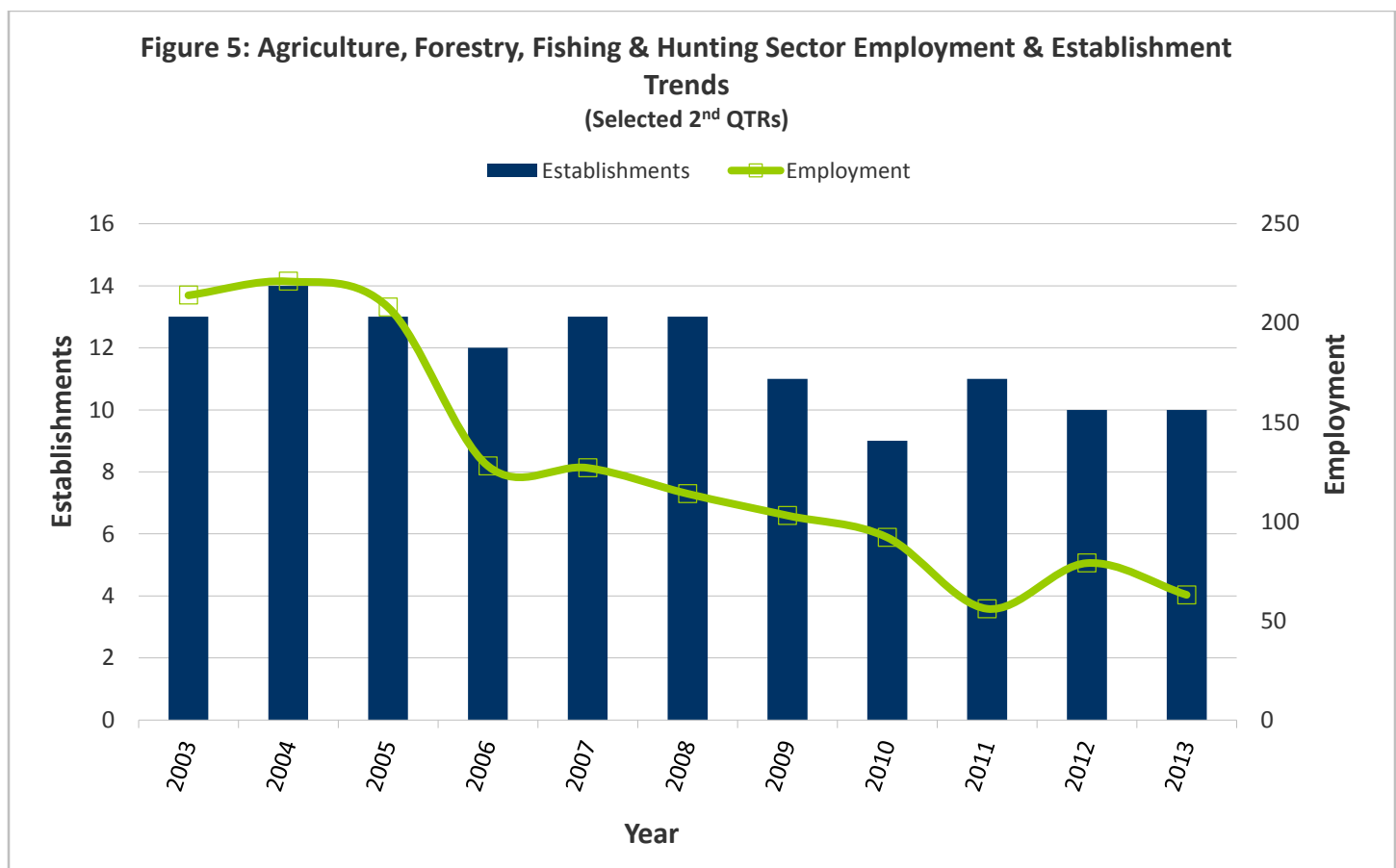
The Agriculture, Forestry, Fishing, and Hunting sector is comprised of establishments engaged in the following four activities:

- Growing Crops
- Raising Animals
- Harvesting Timber
- Harvesting Fish and Other Animals from farms, ranches, or their natural habitats

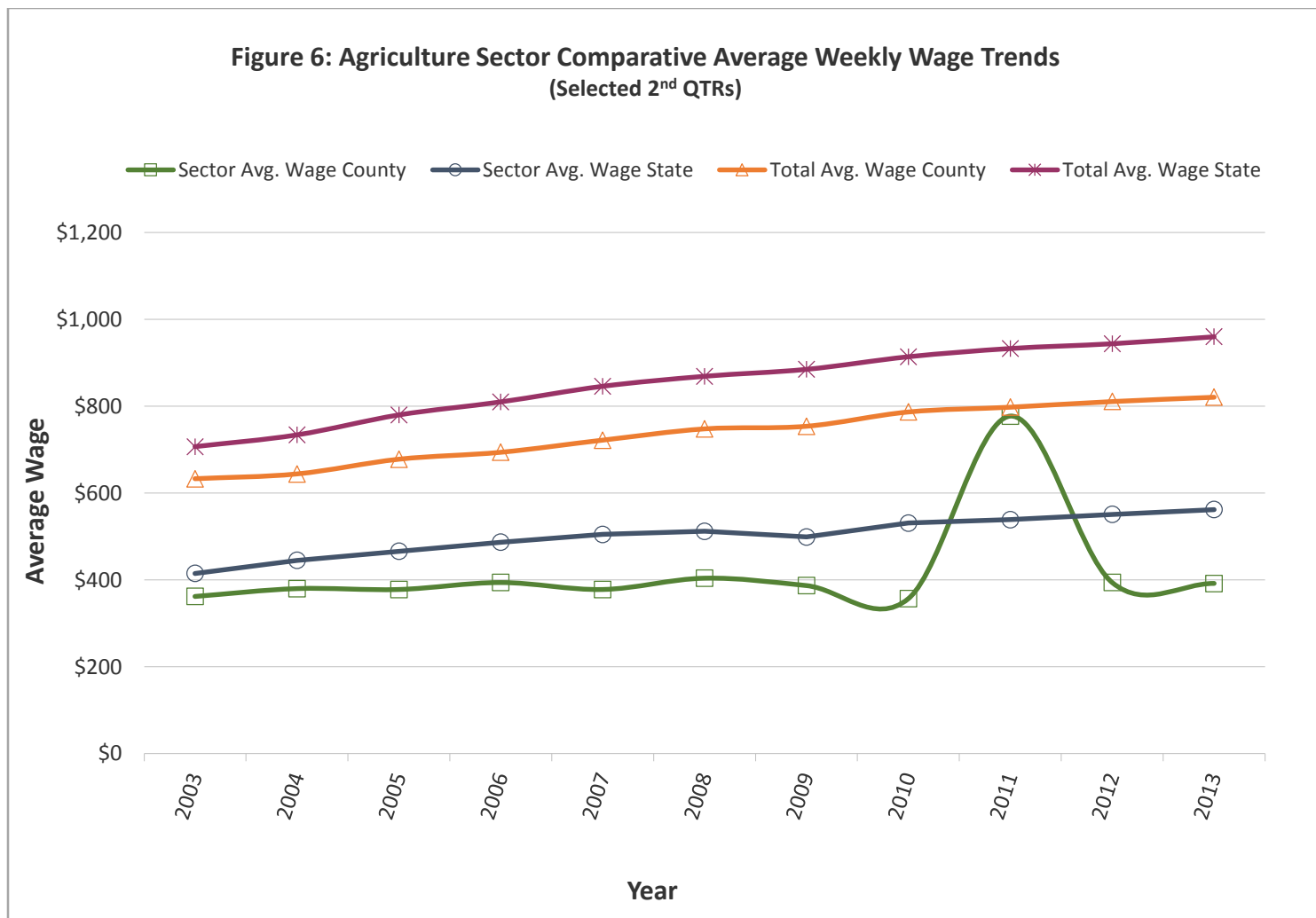


### Sector Trends

Chesterfield County had 10 establishments (0.13 percent of the county total) in this sector during the second quarter of 2013. These establishments employed 63 persons, which accounted for approximately 0.06 percent of the county's total employment. Establishment growth in this sector has been declining during the ten year period, down from 13 establishments in 2003, signifying an average annual decrease of two percent. Employment levels have decreased 71 percent since 2003, or an average annual decrease of nine percent. Figure 5 (below) depicts employment and establishment trends for the Agriculture, Forestry, and Fishing & Hunting sector over the ten-year period from 2003-2013.



The average weekly wage of a worker in the Agriculture, Forestry, Fishing and Hunting sector was \$392 during the second quarter of 2013. This represents an increase of eight percent over the 2003 average of \$362, or an average annual increase of seven percent. The Virginia weekly wage for this sector during the second quarter of 2013 was \$640, an increase of 31 percent over 2003, or an average annual increase of three percent. Chesterfield’s total average weekly wage was \$821 as reported for the second quarter of 2013, whereas Virginia’s total average weekly wage was \$960. These values represent 30 percent and 36 percent increases over 2003, respectively. Figure six below depicts these average weekly wage trends at both the local and state levels for the ten-year period from 2003-2013.



## Job Distribution

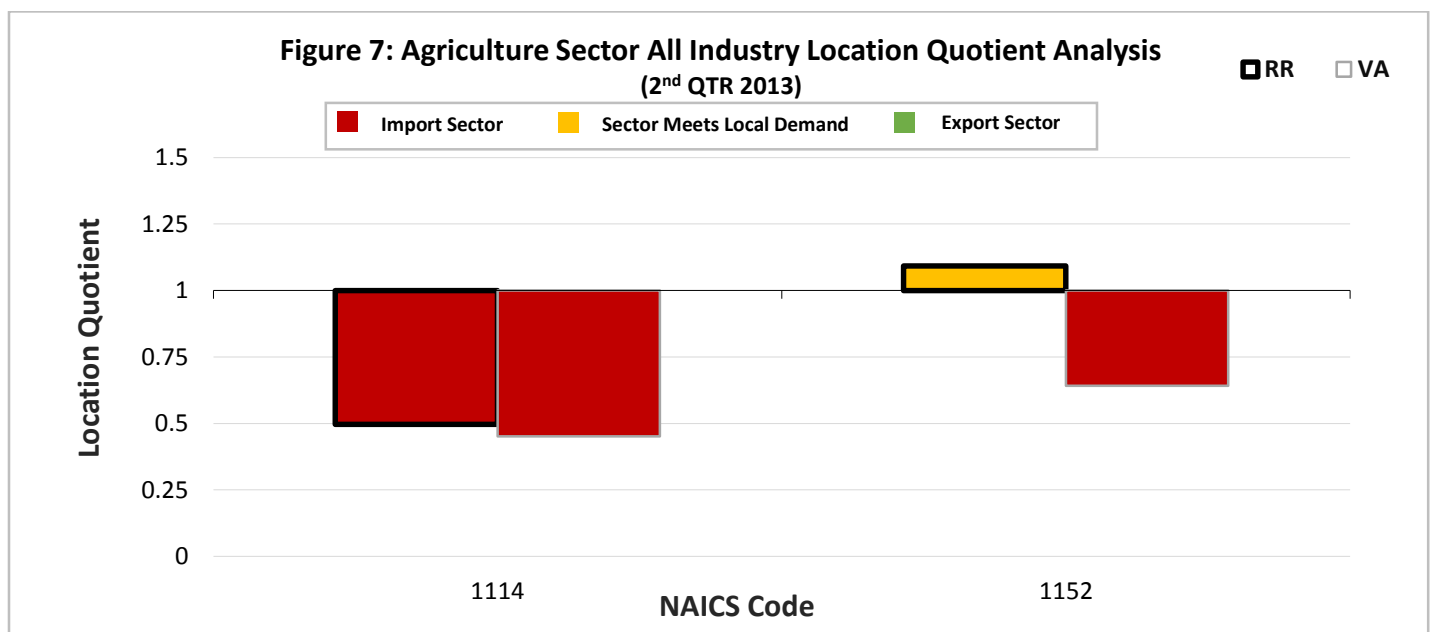
At the state level, there are 17 industries within the Agriculture, Forestry, Fishing and Hunting sector for which data were available, whereas only two of these industries were represented in Chesterfield County. Of these 17 industries, Greenhouse, Nursery, and Floriculture Product represented the majority of sectoral employment at both the state and county levels, at 26 percent and 77 percent of total sectoral employment, respectively. The second industry represented in Chesterfield County was Support Activities for Animal Production, which represented 23% of total sectoral employment at the county level and five percent of total sectoral employment at the state level. Table 2 below outlines each of these industries in greater detail.

**Table 1: Agriculture, Forestry, Fishing and Hunting Sector; Top 2 Industry Employment Second QTR 2013**

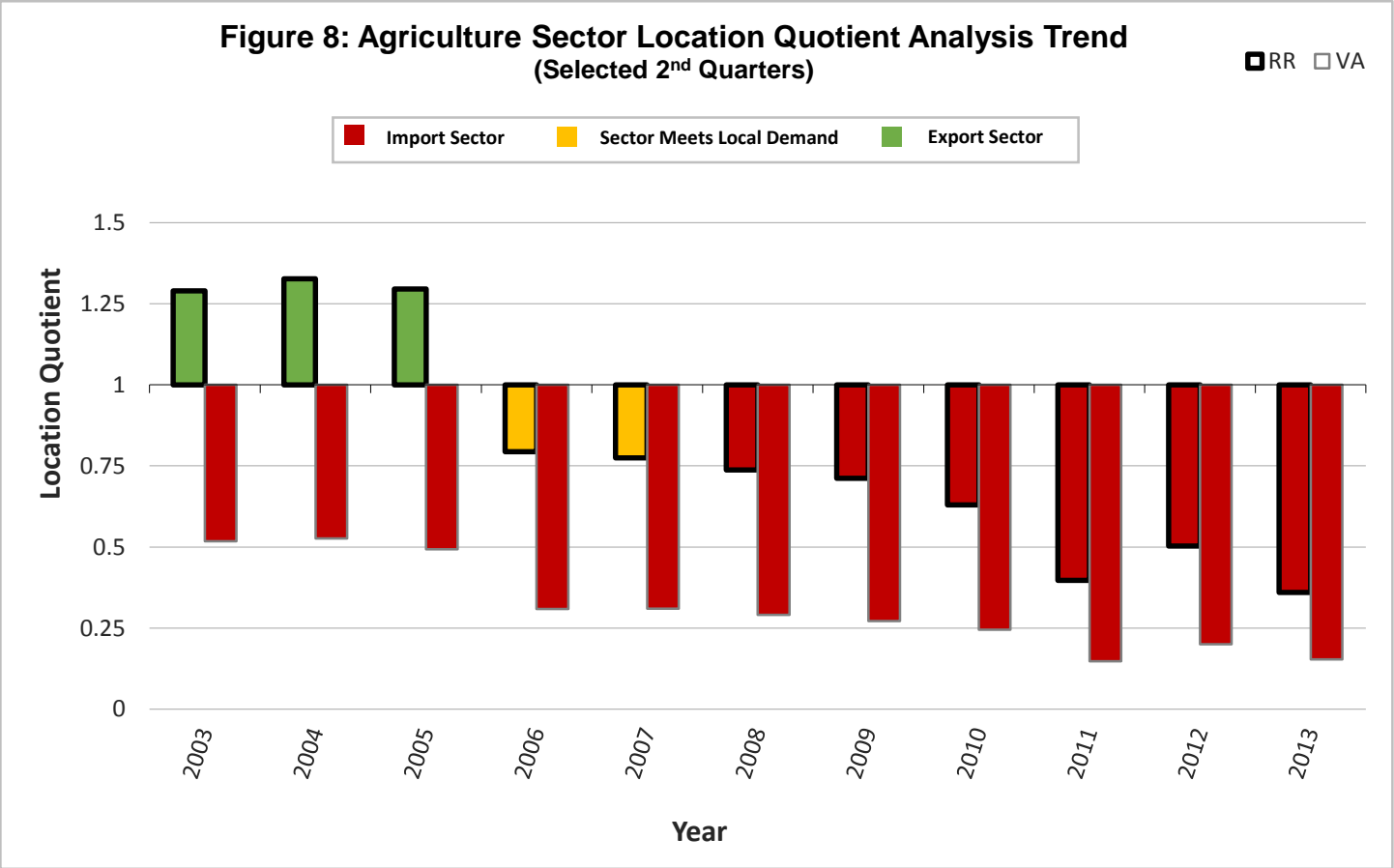
NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
1114	Greenhouse, Nursery, and Floriculture Product	47	3	\$414
1152	Support Activities for Animal Production	14	4	\$267

## Location Quotient Analysis

Industry groups 1114 and 1152 have location quotients that indicate that the goods and services provided by these industries are insufficient to meet local demand. However, the nature of this sector implies that at least some of the product produced locally will be consumed outside of the locality, and that local consumers must often import these products from areas outside of the locality. Figure 7 below depicts the location quotients for each of these industry groups.



The location quotient analysis for the Agriculture, Forestry, Fishing & Hunting sector finds that overall the sector has been weakening since 2003 at both the state and regional levels. Although this sector once served as an exporter for the county at the regional level, it currently exists as an import sector and both the regional and state levels.



## Shift-Share Analysis

Employment in the Agricultural sector in Chesterfield County grew less than the overall average of the state economy. If this sector had matched the state overall growth rate for all industries, this sector would have added 13 jobs from 2003-13, but instead declined by 164 jobs. This state growth share (employment change attributable to growth in the overall state economy) is shown in table 3 below. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2002-12 by 3,464 jobs.

**Table 2: State Growth Share; Agriculture, Forestry, Fishing and Hunting Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Agriculture	214	+6.09%	13	-164
<b>Countywide</b>			<b>+5,596</b>	<b>+9,060</b>

The Agriculture sector was not a competitive industry in Chesterfield from 2003-2013. Local conditions contributed to the non-realization of 142 jobs in this sector during this time. Chesterfield overall is a highly competitive locality within the state, with local conditions contributing to 6,776 jobs above that of the state average.

**Table 3: Local Competitive Share; Agriculture, Forestry, Fishing and Hunting Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Agriculture	214	-70.56%	-4.15%	-142
<b>Countywide</b>				<b>+6,776</b>

## UTILITIES SECTOR

The Utilities sector comprises establishments engaged in the provision of the following utility services:

- Electric power
- Natural gas
- Steam supply
- Water supply
- Sewage removal

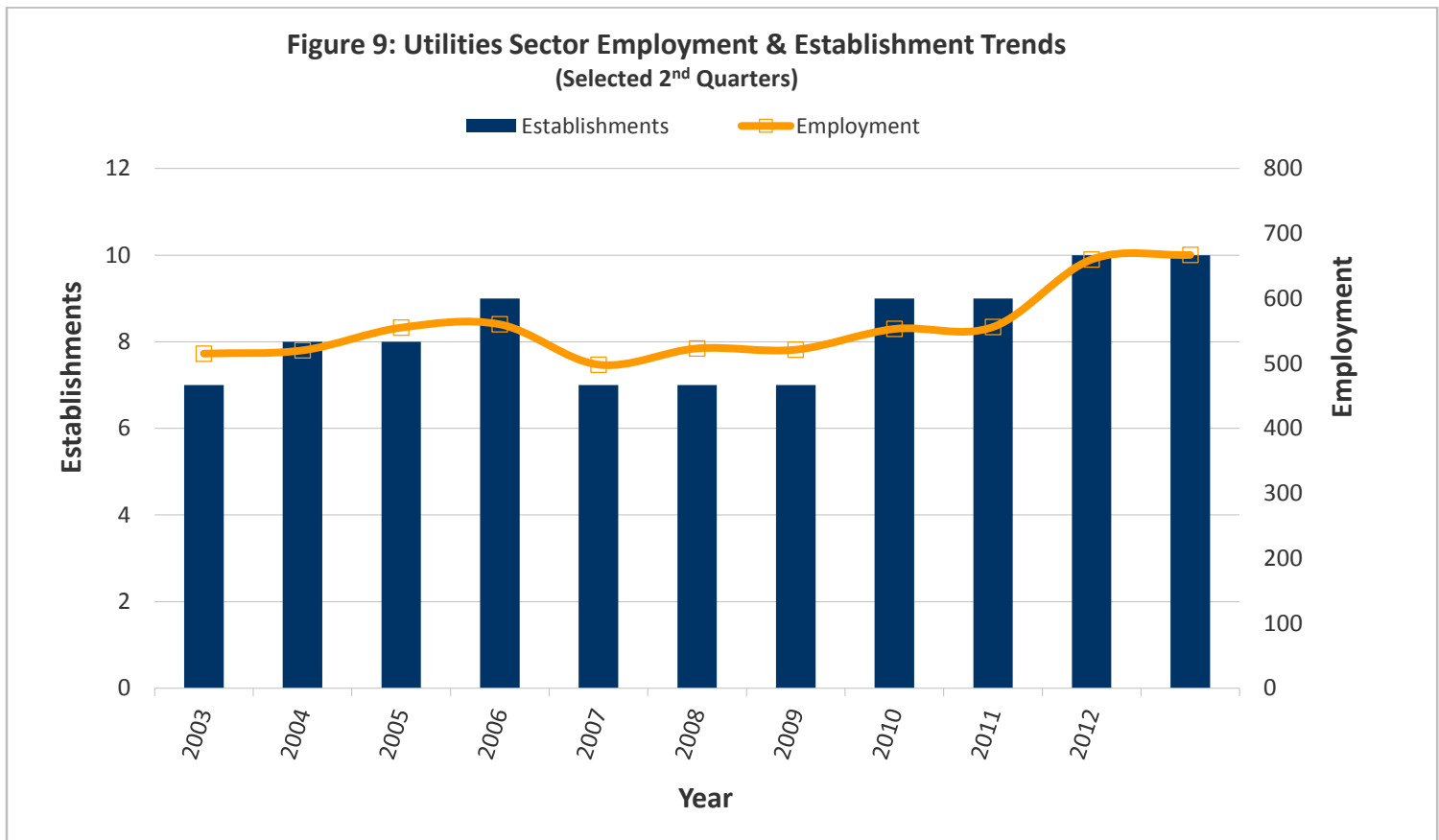
Within this sector, the specific activities associated with the utility services provided vary by utility (i.e. electric power includes generation, transmission, and distribution).



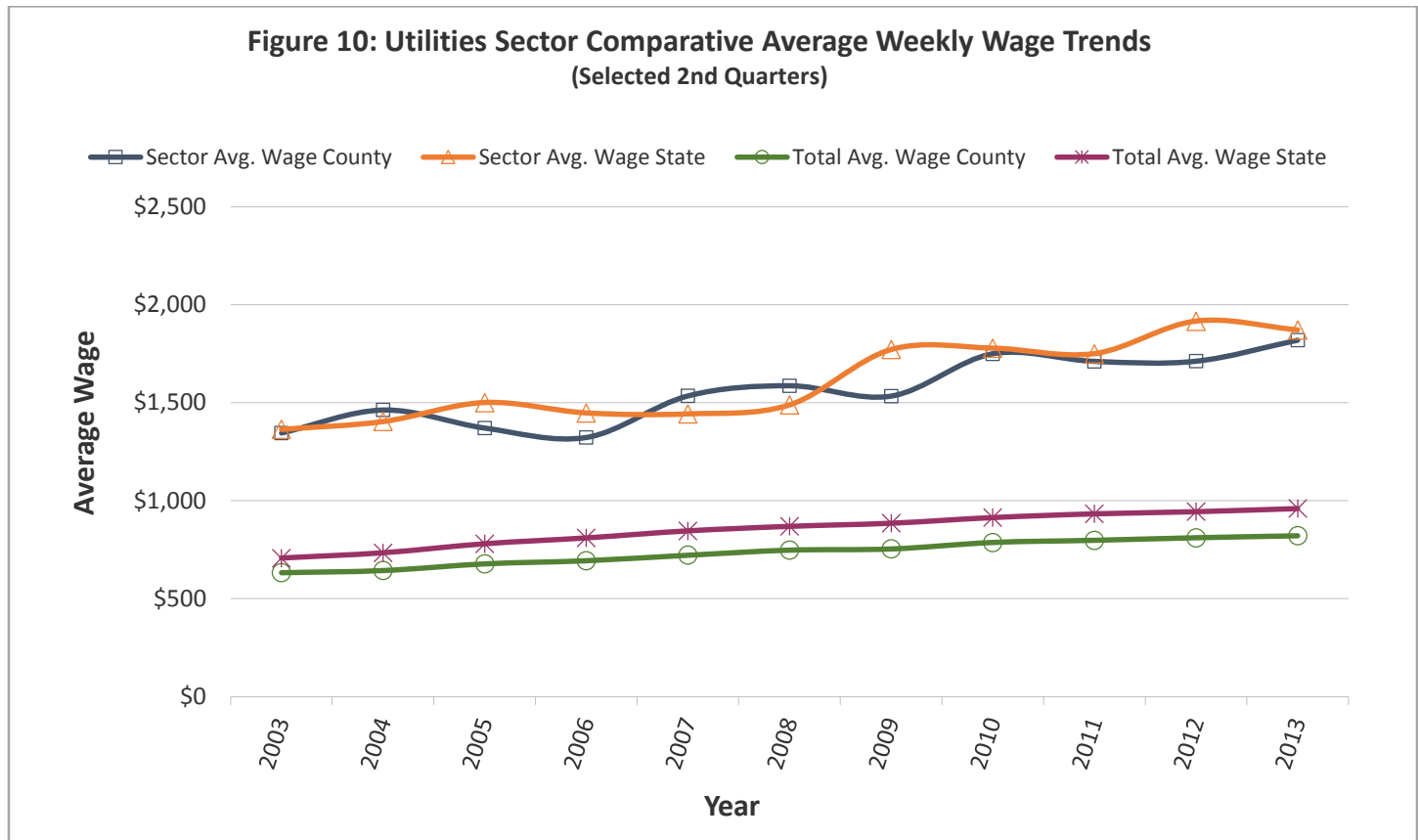
### Sector Trends

Chesterfield had 10 establishments (0.1 percent of the county total) in this sector during the second quarter of 2013, employing 667 persons (0.7 percent of the county total).

The number of establishments in this sector has increased by 43 percent since 2003, when there were seven utility sector businesses in operation. Although the trend exhibited slight fluctuations in employment from 2007-2009, overall employment levels in this sector have increased 30 percent since 2003. In particular, the sector has exhibited a steady increase in both employment and number of establishments since 2009, with increases of 28 percent and 43 percent, respectively. Figure 9 below depicts these trends in further detail.



The average weekly wage of a worker in the Utilities sector in Chesterfield County was \$1,819 as reported for the second quarter of 2013. This represents an increase of 35 percent over the county's 2003 average of \$1,346, or an average annual increase of four percent. Chesterfield's total average weekly wage was \$821, or an increase of 30 percent over 2003, while Virginia's total average weekly wage as \$944, which represents an increase of 37 percent. Figure 10 below depicts these annual fluctuations in average weekly wage at the state and county levels from 2003-2013.



## Job Distribution

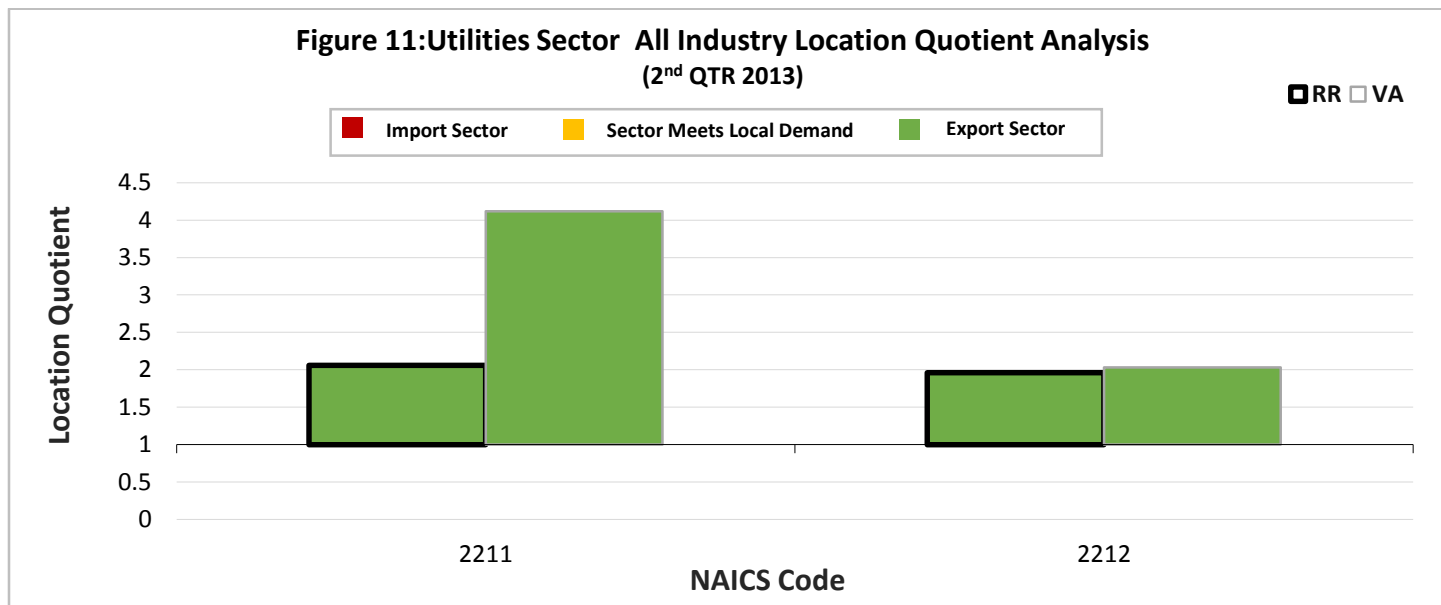
The Electric Power Generation, Transmission, and Distribution industry employed 85 percent of the county's Utilities sector workers during the 2<sup>nd</sup> quarter of 2013. The only other reportable industry in the county, Natural Gas Distribution, employed the remaining 14 percent. The average weekly wage for each industry was \$1,795 and \$1,962, respectively.

**Table 4: Utilities Sector; Top 2 Industry Employment**

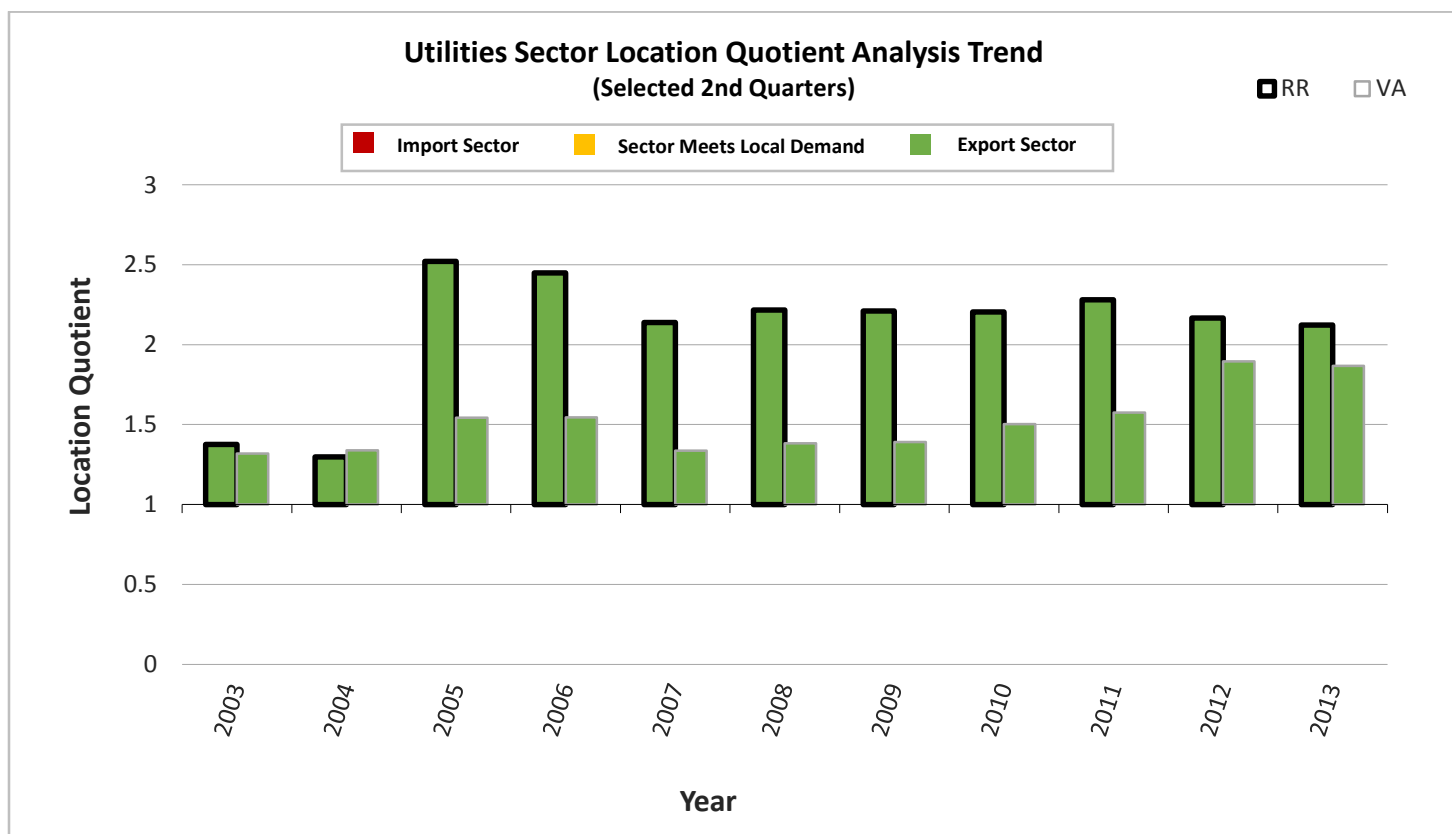
NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
2211	Electric Power Generation, Transmission & Distribution	571	7	\$1,795
2212	Natural Gas Distribution	96	3	\$1,962

## Location Quotient Analysis

Analysis of industries within the Utilities sector indicates that this is one of the strongest economic sectors in the county, exporting a number of services to many localities and customers outside of the county's boundaries. Both industry groups within the sector export at both the regional and state levels.



Chesterfield County has historically enjoyed a rather strong utilities sector, despite some fluctuations in strength over the years. This sector remains a strong basic contributor to the county economy, particularly within the context of the Richmond region, providing services which are used by people outside of the county.





## Shift-Share Analysis

Employment in the Utilities sector grew less than the overall average of the state economy. If this sector had matched the state overall growth rate for all industries, it would have added 42 jobs from 2003-2013, but instead increased by 121 jobs. This state growth share (employment change attributable to growth in the overall state economy) is shown in table six below.

**Table 5: State Growth Share; Utilities Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Utilities	515	+6.09%	+31	+121
<b>Countywide</b>			<b>+5,596</b>	<b>+9,060</b>

Despite lagging behind its predicted growth rate for the ten year period, the Utilities sector in Chesterfield County exhibited a local competitive share which indicated that local conditions contributed to the addition of 213 jobs in this sector. Additionally, although the sector's county growth rate indicated declining employment, this decline was less substantial than that at the state level. Table seven below outlines these interactions in greater detail.

**Table 6: Local Competitive Share; Utilities Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Utilities	515	+29.51%	-11.76%	+213
<b>Countywide</b>				<b>+6776</b>

## CONSTRUCTION SECTOR

The construction sector comprises establishments primarily engaged in:

- The construction of buildings or engineered projects (e.g. highways and utility systems)
- The preparation of sites for new construction
- Subdividing land for sale as building sites

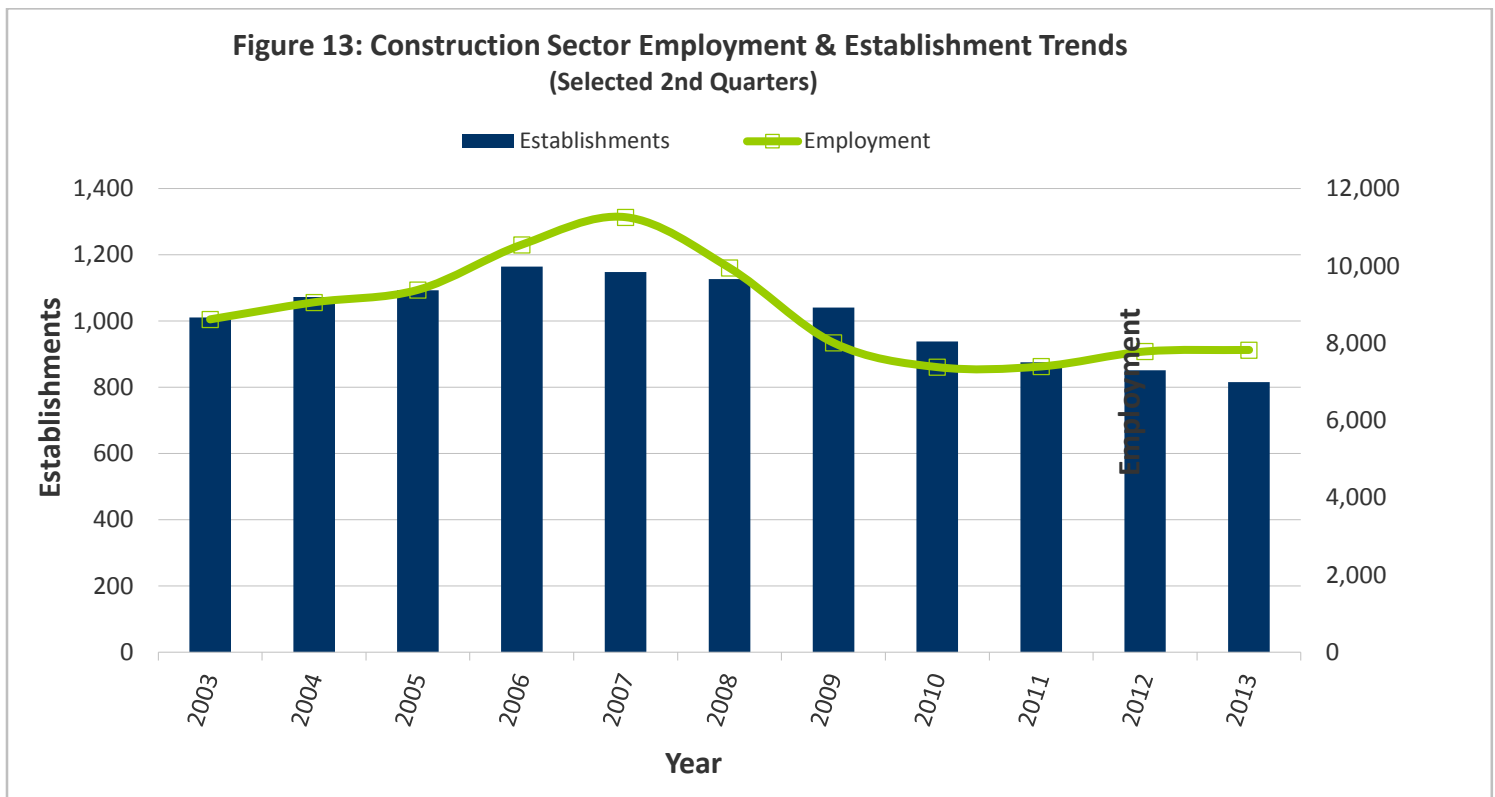


### Sector Trends

Chesterfield County had 815 establishments during the second quarter of 2013 (10.7 percent of the county total), down from 1,010 in 2003, representing a 19 percent decrease over the ten year period. The Construction sector employed 7,820 persons during the second quarter of 2013 (7.7 percent of the county's total).

The Construction sector experienced a spike in employment in 2007 (up 6.7 percent from 2006), before exhibiting a declining trend until 2012 when employment rates began to level off. Decreases in employment levels, particularly in the construction sector, can undoubtedly be attributed, at least in part, to the Great Recession beginning in 2008.

The impacts of the recession are also seen in declines in the number of establishments. Over the ten year period from 2003-2013, establishment growth declined by 19.3 percent. From 2006-2007, the number of establishments declined slightly, at 1.4 percent. The impacts of the recession can truly be seen beginning in 2009, when the number of establishments declined by 7.6 percent and employment by 19.5 percent since 2008.



The average weekly wage for a worker in the Construction sector was \$913 during the second quarter of 2013. This represents an increase of 37.3 percent over 2003, or an average annual increase of 3.6 percent. The average wage for the Construction sector in Virginia was \$906, representing an increase of 34.6 percent over 2003. Although there were discrepancies between average wage for state and county overall, the average wages for the Construction sector at both levels tracked quite closely with one another. Despite the economic downturn, average wages for the sector have exhibited a stable increasing trend from 2003-2013.

**Figure 14: Construction Sector Comparative Average Weekly Wage Trend**  
(Selected 2<sup>nd</sup> QTRs)



## Job Distribution

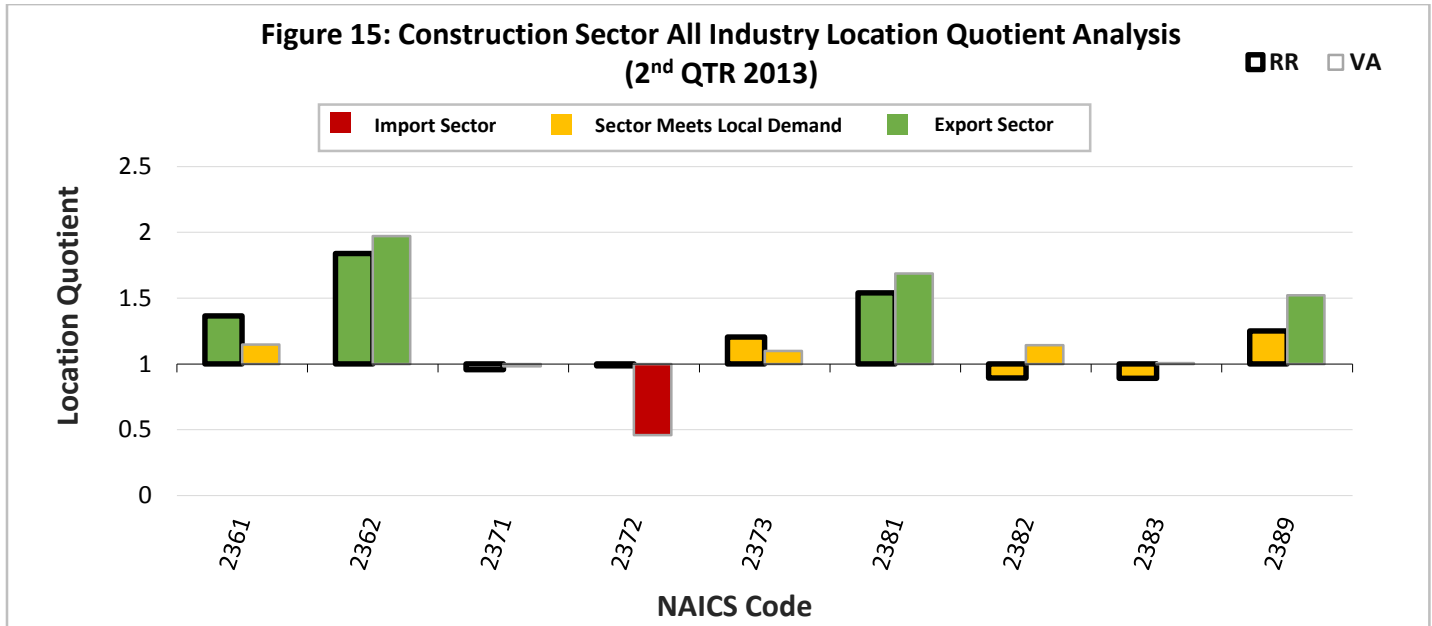
During the second quarter of 2013, just over 27 percent of Construction sector workers in Chesterfield County are employed in the Building Equipment Contractors industry. However, the highest-paying industries in this sector were Non-Residential Building Construction (\$1,162 per week) and Utility System Construction (\$1,138 per week). These two industries accounted for 0.6 percent and 0.2 percent of total sector employment in the county, respectively (Utility System Construction is not one of the top five employers for this sector, and is therefore not listed in the table below).

**Table 7: Construction Sector Top 5 Industry Employment**

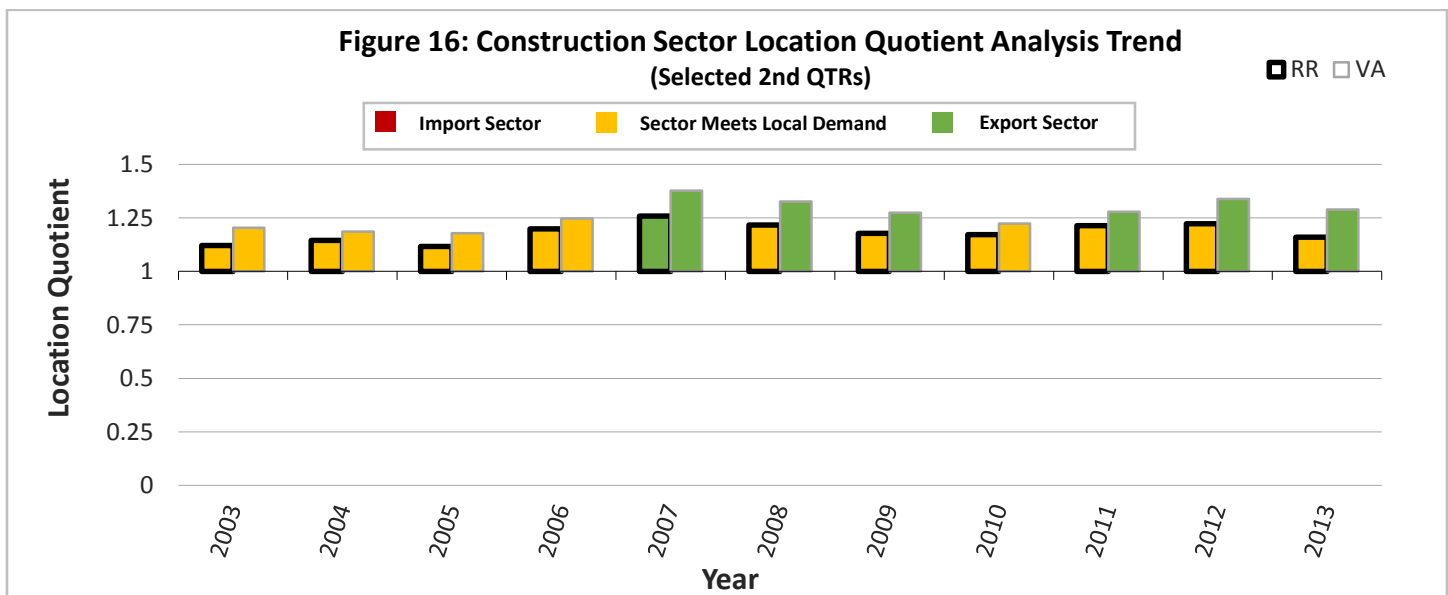
NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
2382	Building Equipment Contractors	2121	198	\$896
2381	Foundation, Structure, and Building Exterior	1226	122	\$768
2362	Non-Residential Building Construction	1194	48	\$1162
2389	Other Specialty Trade Contractors	1006	96	\$952
2361	Residential Building Construction	737	179	\$895

## Location Quotient Analysis

Of the 10 Construction sector industry groups in Chesterfield County for which data was available, six are considered basic, or strong in the local economy. The remaining industries are roughly sufficient to meet demand within Chesterfield County, with the exception of the Land Subdivision industry group (NAICS code 2372). In general, the greater the location quotient, the stronger the industry group is in the local economy, while the lower the location quotient, the weaker the industry group is in the local economy.



The location quotient analysis for the ten year period from 2003-2013 revealed that the Construction sector has declined in strength from 2007-2010, but has increased in strength since 2010. Although the majority of the goods and services provided by this sector most likely remain within the county, it is probable that at least a portion of these goods and services are utilized by areas outside of the county. It is important to take into account the effects of the economic downturn when analyzing this sector, however, as these values may be artificially inflated.



## Shift-Share Analysis

Employment in the Construction sector in Chesterfield County grew less than the overall average of the state economy. If had matched the state overall growth rate for all industries, it would have added 567 jobs from 2003-2013, but instead lost 2,056 jobs. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 8: State Growth Share; Construction Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Construction	8,611	+6.09%	+524	-1,315
<b>Countywide</b>			<b>+5,596</b>	<b>+9,060</b>

Despite the economic downturn, the Construction sector remains a highly competitive industry for Chesterfield. Local conditions contributed to the gain of 761 jobs in this sector from 2003-2013. Chesterfield County overall is a highly competitive jurisdiction within the state, with local conditions contributing to 6,776 jobs above that of the state average.

**Table 9: Local Competitive Share; Construction Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Construction	8,611	-9.19%	-18.02%	+761
<b>Countywide</b>				<b>+6,776</b>

## MANUFACTURING SECTOR

The Manufacturing sector comprises establishments engaged in the transformation of materials, substances, or components into products utilizing the following methods:

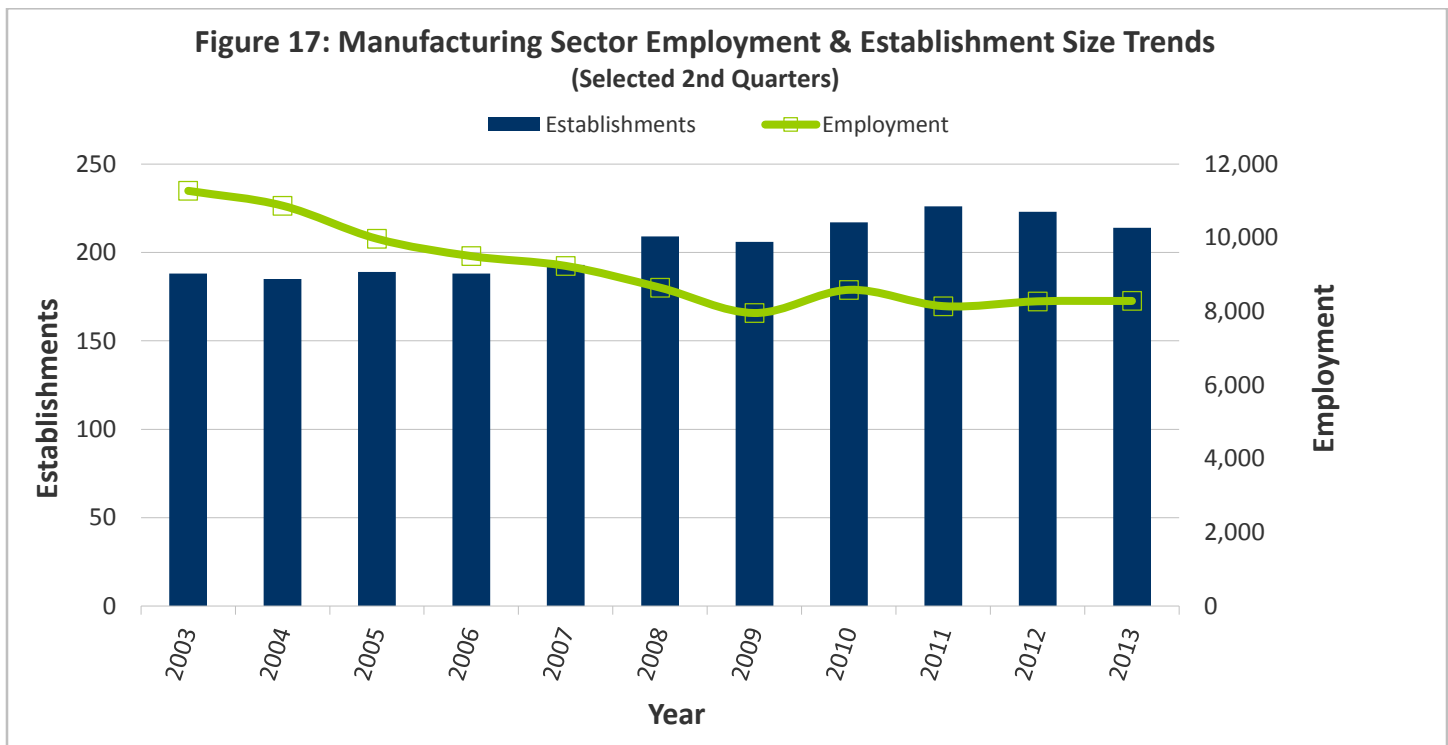
- Mechanical
- Physical
- Chemical

The assembling of component parts of manufactured products is considered manufacturing.



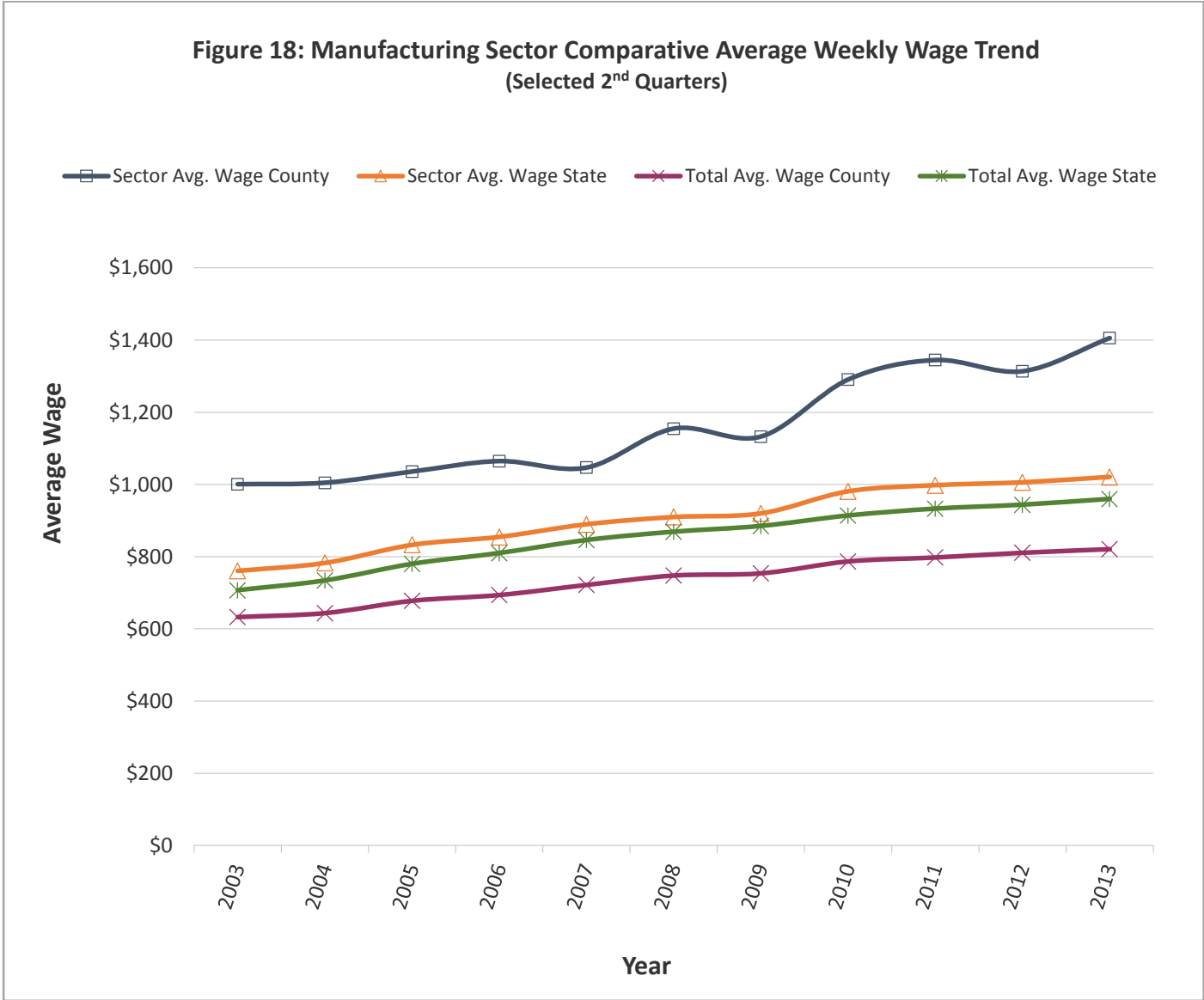
### Sector Trends

Chesterfield had 214 establishments (2.8 percent of the county total) as reported for the second quarter of 2013, employing 8,285 persons (8.2 percent of the county total). Establishment growth in this sector has been increasing since 2003 (13.8 percent), however employment has decreased by 26.5 percent over the ten year period. This represents an average annual decrease in employment of 3.2 percent.



The average weekly wage of a worker in the Manufacturing sector in Chesterfield County was \$1,406 as reported for the second quarter of 2013. This is an increase of 40.5 percent over 2003, or an average annual increase of four percent. The average weekly wage for Virginia was \$1,021 during the second quarter of 2013, which represented a 34.2 percent increase over 2003. Chesterfield's total average weekly wage was \$821, an increase of 30 percent over 2003, and Virginia's average weekly wage was \$944, representing an increase of 37 percent over 2003.

The average weekly wage for this sector at the county level has consistently surpassed the wage at the state level, increasing most notably beginning in the period from 2009-2010 by 13.9 percent and continuing on an upward trend through 2013. In 2011, the Manufacturing wage in Chesterfield County was 35 percent higher than the state wage.





## Job Distribution

The majority of the Manufacturing sector industries have data which are non-disclosable (meaning there are less than three establishments in that industry). Of the industries reporting, Other Miscellaneous Manufacturing accounted for 3.8 percent of total employment for the sector. The highest-paying reporting industry group was Pharmaceutical Medicine Manufacturing, with an average weekly wage of \$2,862. This industry only accounted for 0.08 percent of total sector employment, however.

**Table 10: Manufacturing Sector Top 5 Industry Employment**

NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
3399	Other Misc. Manufacturing	314	12	\$1,859
3339	Other General Purpose Machinery Manufacturing	273	7	\$1,467
3313	Alumina and Aluminum Production and Processing	210	3	\$1,170
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	176	13	\$799
3231	Printing and Related Support Activities	150	18	\$846

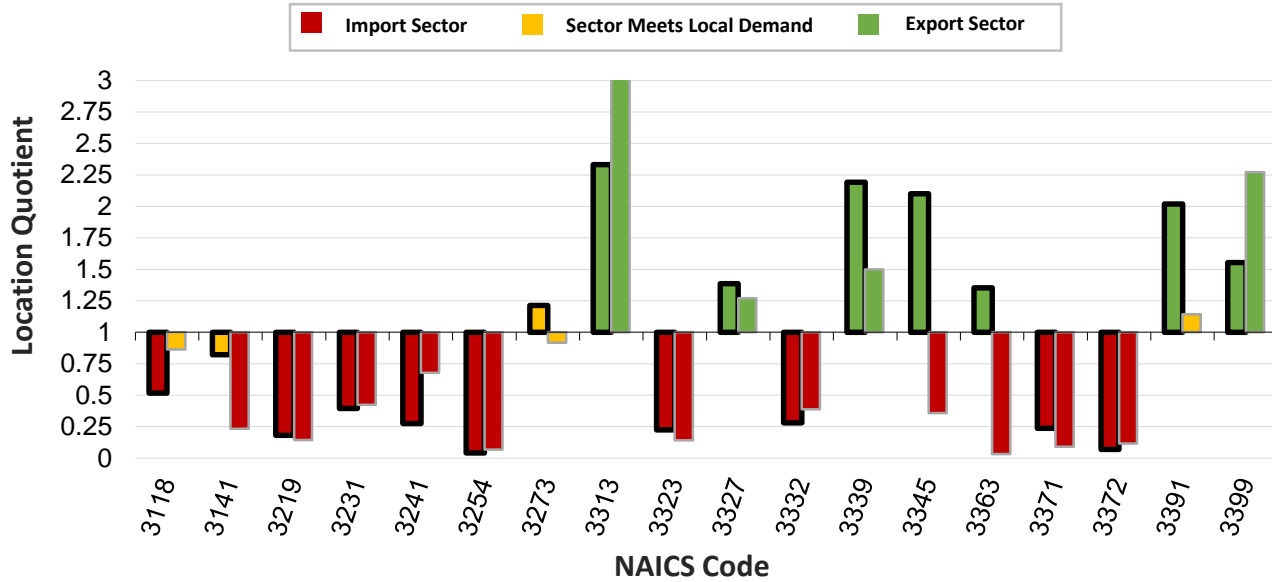
## Location Quotient Analysis

Of the 21 reportable Manufacturing sector industry groups in Chesterfield, 11 are considered basic, or exporting to areas outside of the county at both the state and regional levels. When compared to state level employment, Chesterfield County is extremely basic in the Alumina and Aluminum Production and Processing industry group. This representation is due to the presence of the Reynold's Metals Plant located in north Chesterfield County which is responsible for providing aluminum building sheet to the construction industry.

Basic industries are drivers of the local economy, typically bringing in money from surrounding jurisdictions for services provided. In general, the higher the location quotient, the stronger the industry group is in the local economy, while the lower the location quotient, the weaker the industry group is in the local economy. It is generally presumed that industries which exhibit location quotients greater than 1.25 are more likely to export goods and services outside of the local economy.

**Figure 19: Manufacturing Sector All Industry Location Quotient Analysis  
(2<sup>nd</sup> QTR 2013)**

RR VA

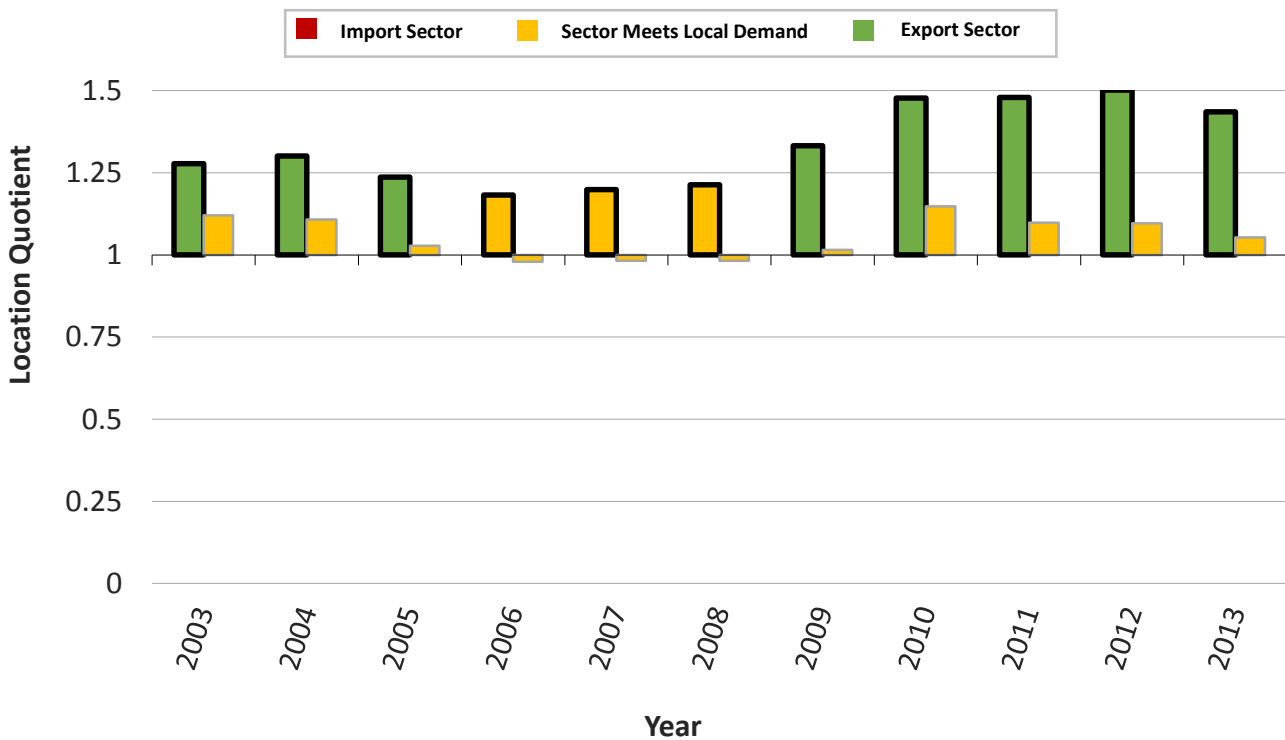


The location quotient analysis for the Manufacturing sector finds that this industry has been increasing in strength since 2006. Chesterfield retains a strong base in several individual manufacturing industry groups and, due to its nature, many of this sector's products are exported.

**Figure 20: Manufacturing Sector Location Quotient Analysis Trend  
(2<sup>nd</sup> QTR 2013)**

RR

VA



## Shift-Share Analysis

Employment in this sector in Chesterfield County grew less than the overall average for the state economy. If this sector matched the state overall growth rate for all industries, it would have added 675 jobs from 2003-2013, but instead lost 3,466 jobs. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 11: State Growth Share; Manufacturing Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Manufacturing	11,274	+6.09%	+687	-3,676
<b>Countywide</b>			<b>+5,596</b>	<b>+9,060</b>

The Manufacturing sector experienced a slight downturn in the county during the ten year period. Local conditions contributed to the loss of 230 jobs in this sector from 2003-2013. Nationwide, this sector is undergoing a shift from human-based production methods to machine-based components, which may have contributed, at least in part, to the loss of jobs locally. Chesterfield County overall is a highly competitive jurisdiction within the state, with local conditions contributing to 6,776 jobs above the state average.

**Table 12: Local Competitive Share; Manufacturing Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Manufacturing	11,274	-26.51%	-24.48%	-230
<b>Countywide</b>				<b>+6,776</b>

## WHOLESALE TRADE SECTOR

The Wholesale Trade sector comprises establishments engaged in wholesaling merchandise. The wholesaling process is an intermediate step in the distribution of merchandise. Wholesalers sell:

- goods for resale (i.e. to retailers)
- capital or durable nonconsumer goods
- raw and intermediate materials and supplies used in production



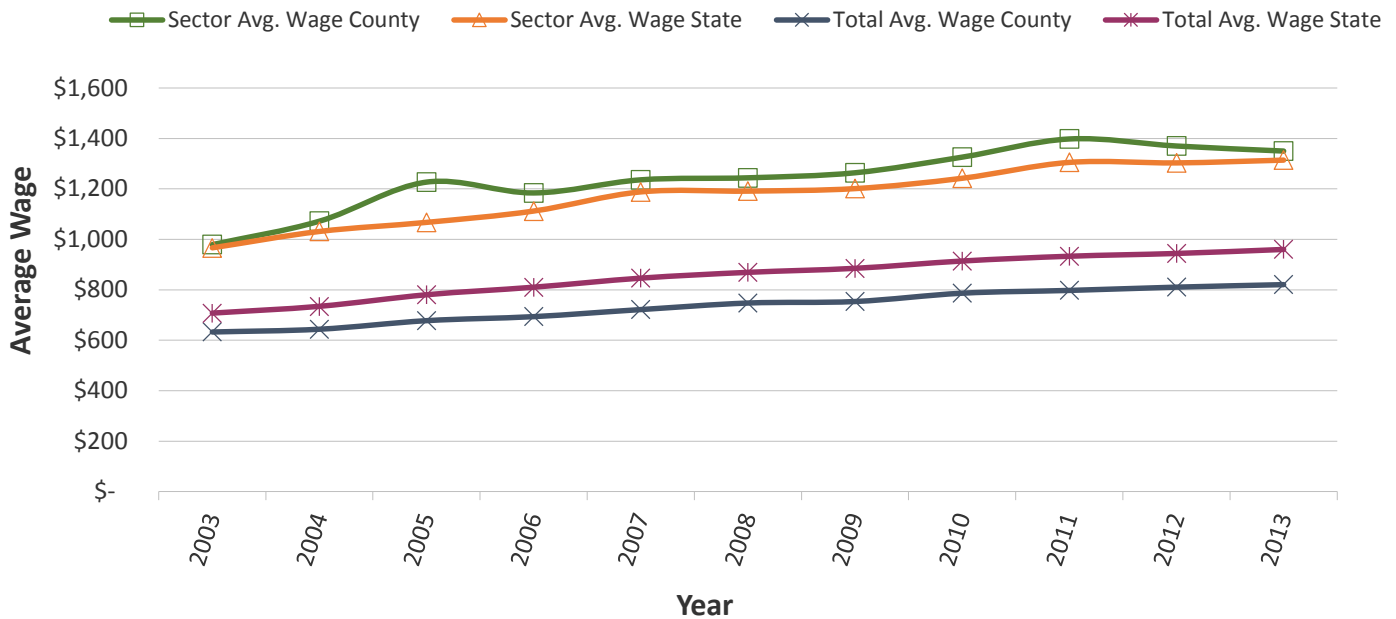
### Sector Trends

Chesterfield County had 538 establishments as reported for the second quarter of 2013 (5.1 percent of the county total), employing 5,150 persons (7.1 percent of the county total). Employment in this sector has exhibited an increase of 32.8 percent since 2003, or an average annual increase of 3.4 percent, whereas establishment growth has shown some fluctuations, and has been declining since 2009. Overall, establishment growth has shown a net decrease of 5.4 percent.



The average weekly wage for a worker in the Wholesale Trade sector was \$1,350 during the second quarter of 2013. This represents a net increase of 37.9 percent since 2003, or an average annual increase of 3.8 percent. The Virginia wage for the second quarter of 2013 was 1,314, which represents a net increase of 36 percent since 2003, or an annual increase of 3.5 percent. Chesterfield's total average weekly wage was \$821, an increase of 30 percent over 2003, and Virginia's average weekly wage was \$960, representing an increase of 36 percent over 2003.

**Figure 22: Wholesale Trade Sector Comparative Average Weekly Wage Trend  
(Selected 2<sup>nd</sup> QTRs)**



## Job Distribution

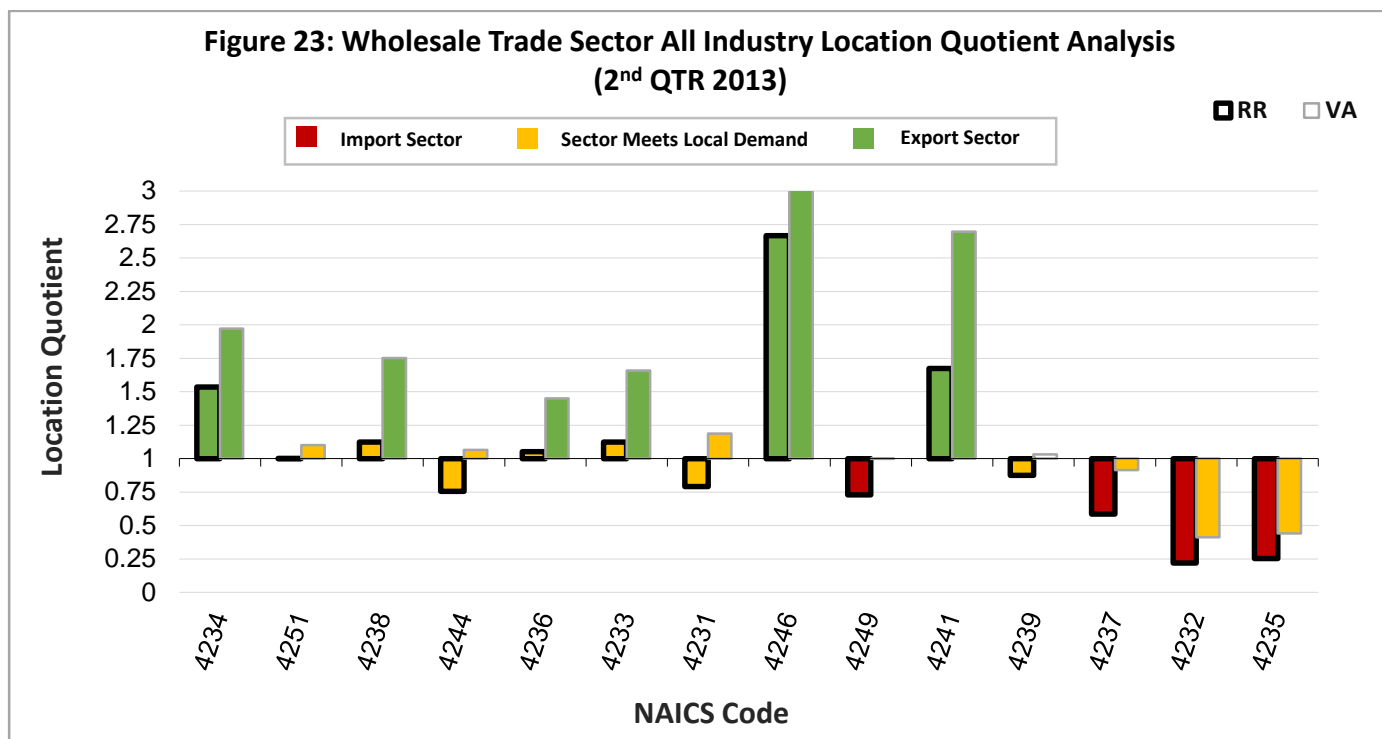
Approximately 27 percent of Wholesale Trade workers are employed in the Professional and Commercial Equipment and Suppliers Wholesalers industry. This group also has the highest average weekly wage for the sector, at \$1,920 as reported for the second quarter of 2013.

**Table 13: Wholesale Trade Sector; Top 5 Industry Employment 2nd QTR 2013**

NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
<b>4234</b>	Professional and Commercial Equipment and Suppliers Wholesalers	1,046	48	\$1,920
<b>4251</b>	Wholesale Electronic Markets and Agents and Brokers	771	210	\$1,574
<b>4238</b>	Machinery, Equipment and Supplies Merchant Wholesalers	757	71	\$1,176
<b>4244</b>	Grocery and Related Product Merchant Wholesalers	474	21	\$898
<b>4236</b>	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	281	31	\$1,037

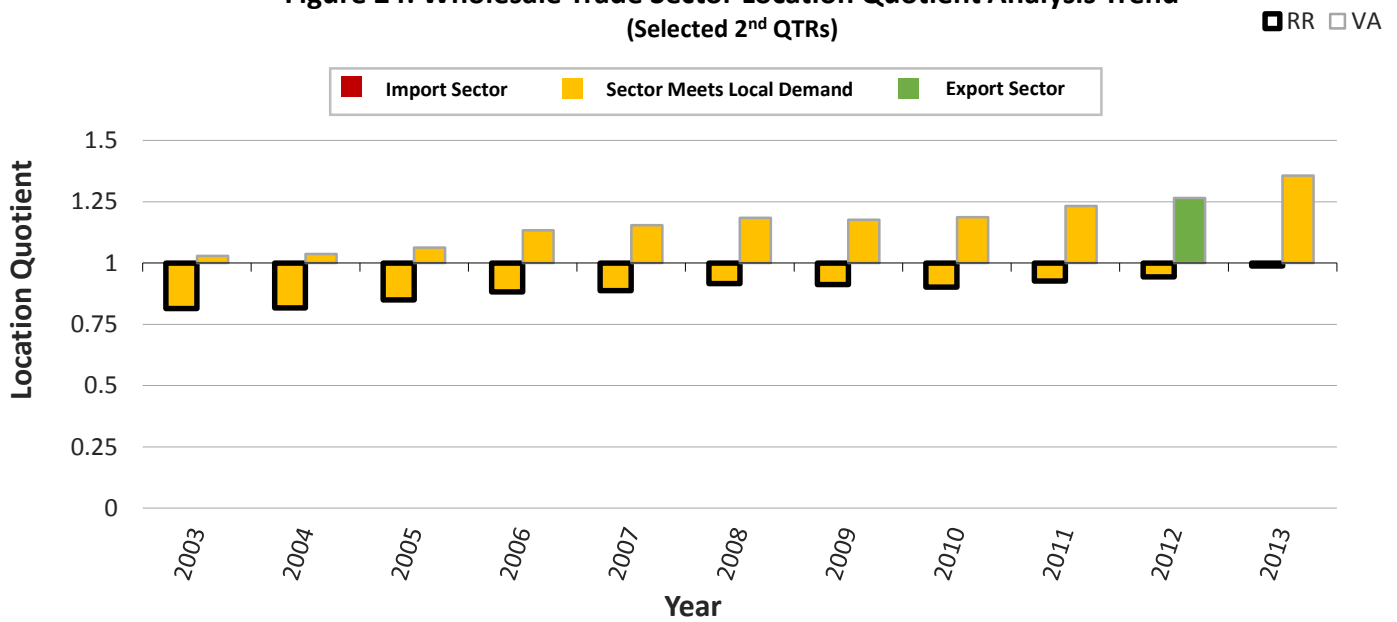
## Location Quotient Analysis

Of the 15 reportable wholesale trade sector industry groups in Chesterfield, four are considered basic, or exporting compared to both the region and the state. Basic industries are drivers of the local economy, typically bringing in money from surrounding jurisdictions for services provided. In general, the higher the location quotient, the stronger the industry group is in the local economy, while the lower the location quotient, the weaker the industry group is in the local economy. It is generally supposed that industries exhibiting location quotients greater than 1.25 are more likely to export their goods and services beyond the boundaries of the local economy, whereas those industries exhibiting location quotients lower than 0.75 are likely insufficient to meet local demand.



Location quotient analysis for the Wholesale Trade sector finds that this industry has been increasing in strength since 2003. This sector's overall strength is such that it is considered to be meeting local demand compared to the region overall, but has a stronger presence compared to the state level, particularly in 2012 when this sector was an export sector for the region compared to the state level, a trend which has continued through 2013.

**Figure 24: Wholesale Trade Sector Location Quotient Analysis Trend**  
(Selected 2<sup>nd</sup> QTRs)



## Shift-Share Analysis

Employment in this sector in Chesterfield County grew quicker than the overall average of the state economy. If this sector had matched the state overall growth rate for all industries, it would have added 236 jobs during the ten year period from 2003-2013, but instead gained 1,037 jobs. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 14: State Growth Share; Wholesale Trade Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Wholesale Trade	3,877	+6.09%	+236	+1,037
<b>Countywide</b>			<b>+5,596</b>	<b>+9,060</b>

The Wholesale Trade sector is a competitive industry in Chesterfield County. Local conditions contributed to the realization of 1,368 jobs in this sector from 2003-2013. Chesterfield County overall is a highly competitive jurisdiction within the state, with local conditions resulting in 6,776 jobs above the state average.

**Table 15: Local Competitive Share; Wholesale Trade Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Wholesale Trade	3,877	+32.83%	-2.45%	+1,368
<b>Countywide</b>				<b>+6,776</b>

## RETAIL TRADE SECTOR

The Retail Trade sector comprises establishments engaged in:

- Retailing and merchandise, generally without transformation
- Rendering services incidental to the sale of merchandise
- The final step in the distribution of merchandise.



### Sector Trends

Chesterfield County had 884 establishments (11.6 percent of the county total) during the second quarter of 2013, employing 18,990 persons (18.8 percent of the county total).

Establishment growth exhibited minor fluctuations from 2003-2010, with a relatively sharp decline from 2010-2011. Between 2012 and 2013, establishment growth has once again exhibited an increasing trend. Overall, Retail Trade establishments decreased by 2.3 percent over the ten year period, or an average annual decrease of 0.2 percent.

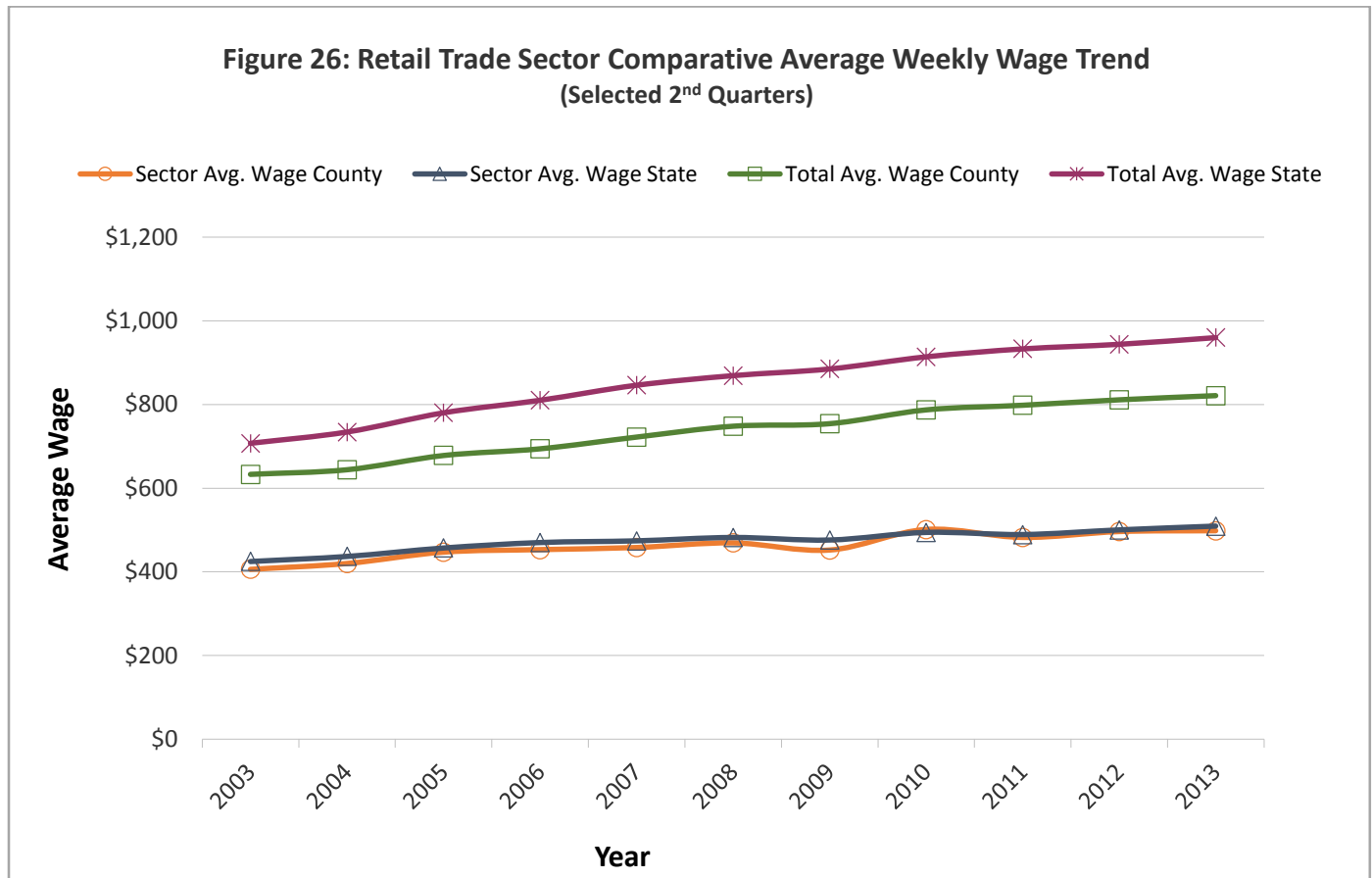
Employment for this sector exhibited an increasing trend from 2003-2007, with a steady decline beginning in 2008. Employment in the Retail Trade sector began to rise once again in 2012, with a sharp increase in 2013, and indications of a continually increasing trend. From 2011-2013, this sector added 2,241 jobs, for an increase of 13.4 percent over a single two year period. Overall, employment increased by 10.6 percent over the ten year period from 2003-2013, or an annual average increase of 1.2 percent. Figure 25 below displays these trends in greater detail.





The average weekly wage of a worker in the Retail Trade sector was \$498 as reported for the second quarter of 2013. This represents an increase of 22.7 percent over 2003, or an average annual increase of 2.4 percent. The Virginia wage was \$509 during the second quarter of 2013, which represents an increase of 19.8 percent over the ten year period, or an average annual increase of 2.0 percent.

The state and county wages for this sector are highly comparable, with very little discrepancy between wages at these two levels. Chesterfield's total average weekly wage was \$821, an increase of 30 percent over 2003, and Virginia's average weekly wage was \$960, representing an increase of 36 percent over 2003. Figure 26 below displays these trends in greater detail.



## Job Distribution

Just over 16 percent of workers in the Retail Trade sector are employed in the Grocery Stores industry group, however the industry group with the highest average weekly wage was Automobile Dealers, at \$921.

**Table 16: Retail Trade Sector; Top 6 Industry Employment (2<sup>nd</sup> QTR 2013)**

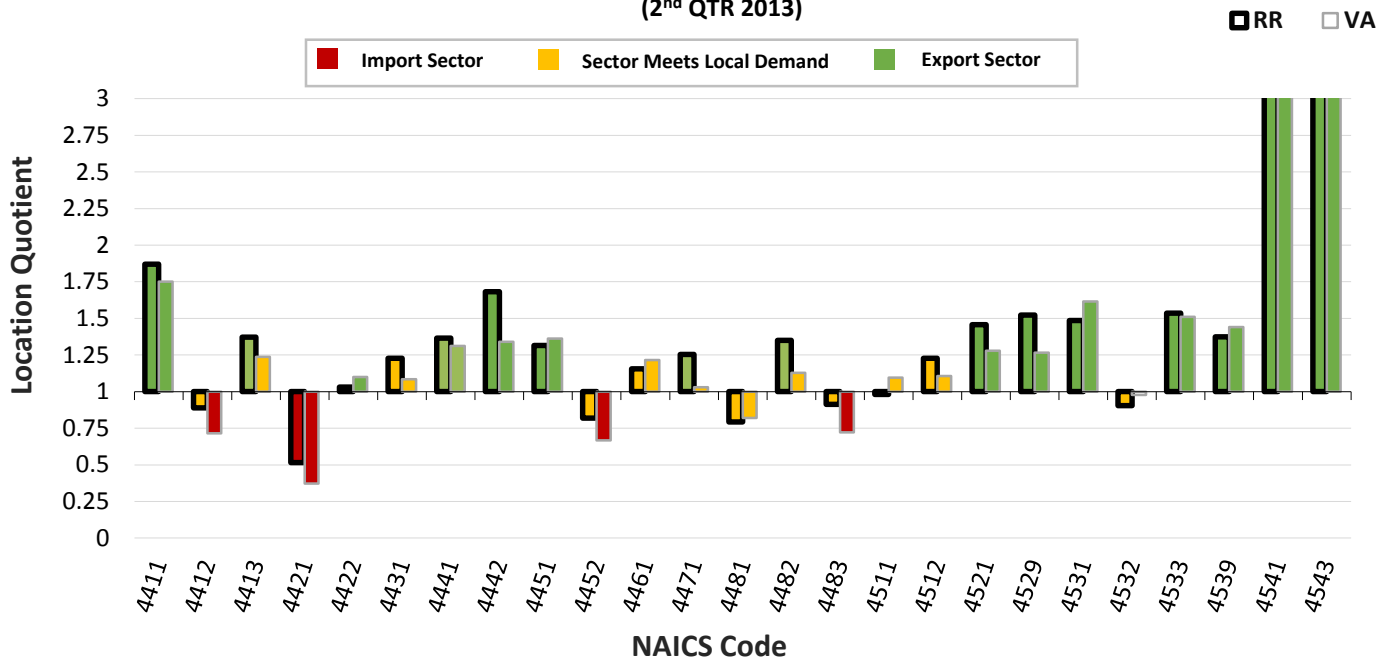
NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
4451	Grocery Stores	3,105	62	\$370
4541	Electronic Shopping and Mail- Order	2,267	11	\$461
4529	Other General Merchandise Stores	2,206	42	\$424
4411	Automobile Dealers	2,082	64	\$921
4521	Department Stores	1,552	19	\$357
4471	Gasoline Stations	1,015	102	\$366

## Location Quotient Analysis

Of the 24 reportable retail trade sector industry groups in Chesterfield County, 10 are considered basic, or exporting compared to both the region and the state. Most significantly, Electronic Shopping

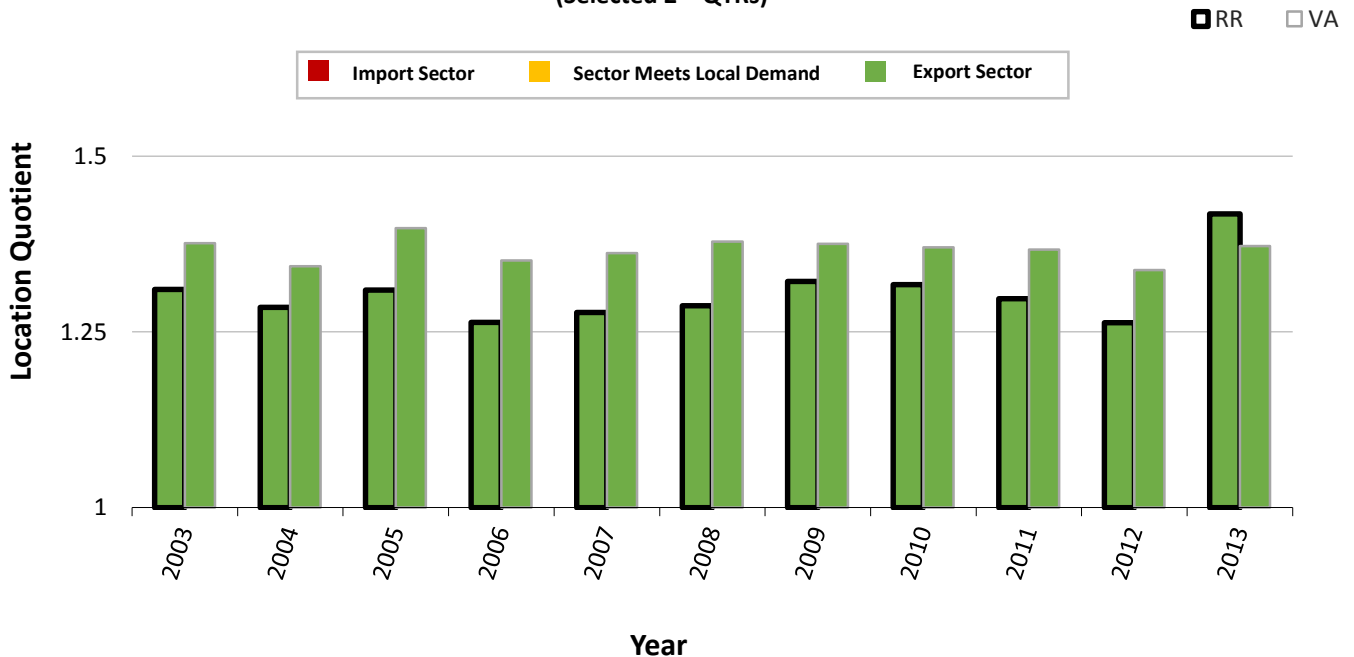
Basic industries are drivers of the local economy, typically bringing in money from surrounding jurisdictions for services provided. Most of the remaining industries are generally viewed as being sufficient to meet the demands of the county. In general, those industries reporting location quotients greater than 1.25 are most likely to be exporting their goods and services outside of the local economy, whereas those with location quotients less than 0.75 are unlikely to be sufficient to meet local demand.

**Figure 27: Retail Trade Sector All Industry Location Quotient Analysis  
(2<sup>nd</sup> QTR 2013)**



Location quotient analysis for the Retail Trade sector finds that it has been relatively stable since 2003. However, this sector is, and traditionally has been, one of the major economic drivers of Chesterfield County, providing goods and services to not only county residents but to residents of surrounding jurisdictions as well.

**Figure 28: Retail Trade Sector Location Quotient Analysis Trend  
(Selected 2<sup>nd</sup> QTRs)**



## Shift-Share Analysis

Employment in the Retail Trade sector in Chesterfield County grew more slowly than the overall average of the state economy. If this sector's growth had matched that of the state overall, it would have added 1,115 jobs over the ten year period from 2003-2013. Instead, this sector experienced a loss of 432 jobs over this period. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 17: State Growth Share; Retail Trade Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Retail Trade	17,167	+6.09%	+1,046	+777
<b>Countywide</b>			<b>+5,596</b>	<b>+9,060</b>

The Retail Trade sector continues to be a competitive sector of the local economy. 2012 data showed this sector to be losing competitiveness, with local conditions contributing to a net loss of 896 jobs from 2002-2012. However, a sharp increase in employment between 2012 and 2013 contributed to the resurgence of this sector's competitiveness for the county, and the addition of 1,442 jobs. Chesterfield County overall is a highly competitive jurisdiction within the state, with local conditions contributing to the realization of 6,776 jobs above the state average.

**Table 18: Local Competitive Share; Retail Trade Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Retail Trade	17,167	+10.62%	+2.22%	+1,442
<b>Countywide</b>				<b>+6,776</b>

## TRANSPORTATION AND WAREHOUSING SECTOR

The Transportation and Warehousing sector includes industries providing:

- Transportation of passengers and cargo
- Warehousing and storage for goods
- Scenic and sightseeing transportation
- Support activities related to modes of transportation

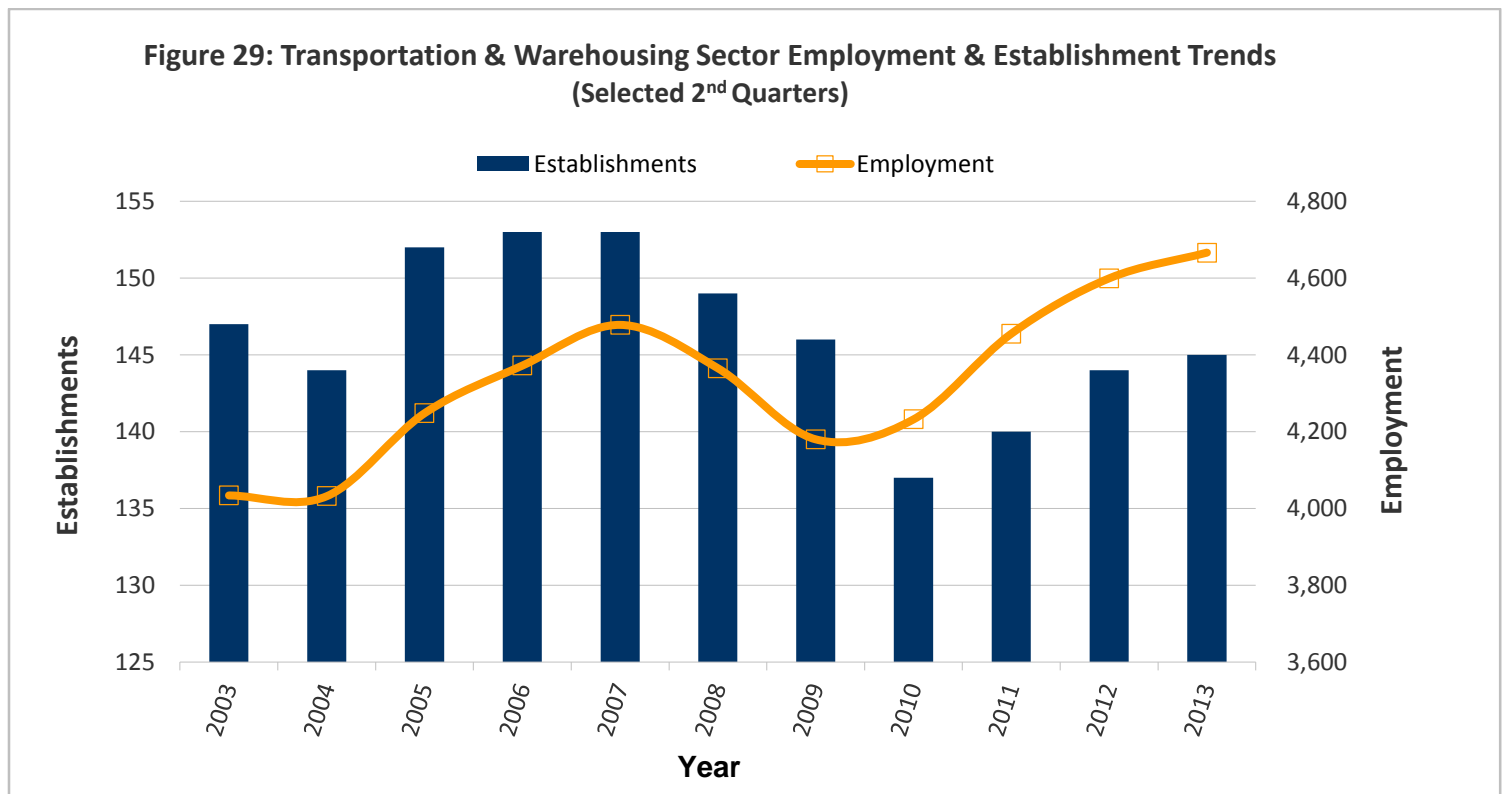
Establishments included in this sector use transportation equipment or facilities as a productive asset. The various modes of transportation are air, water, road and pipeline.



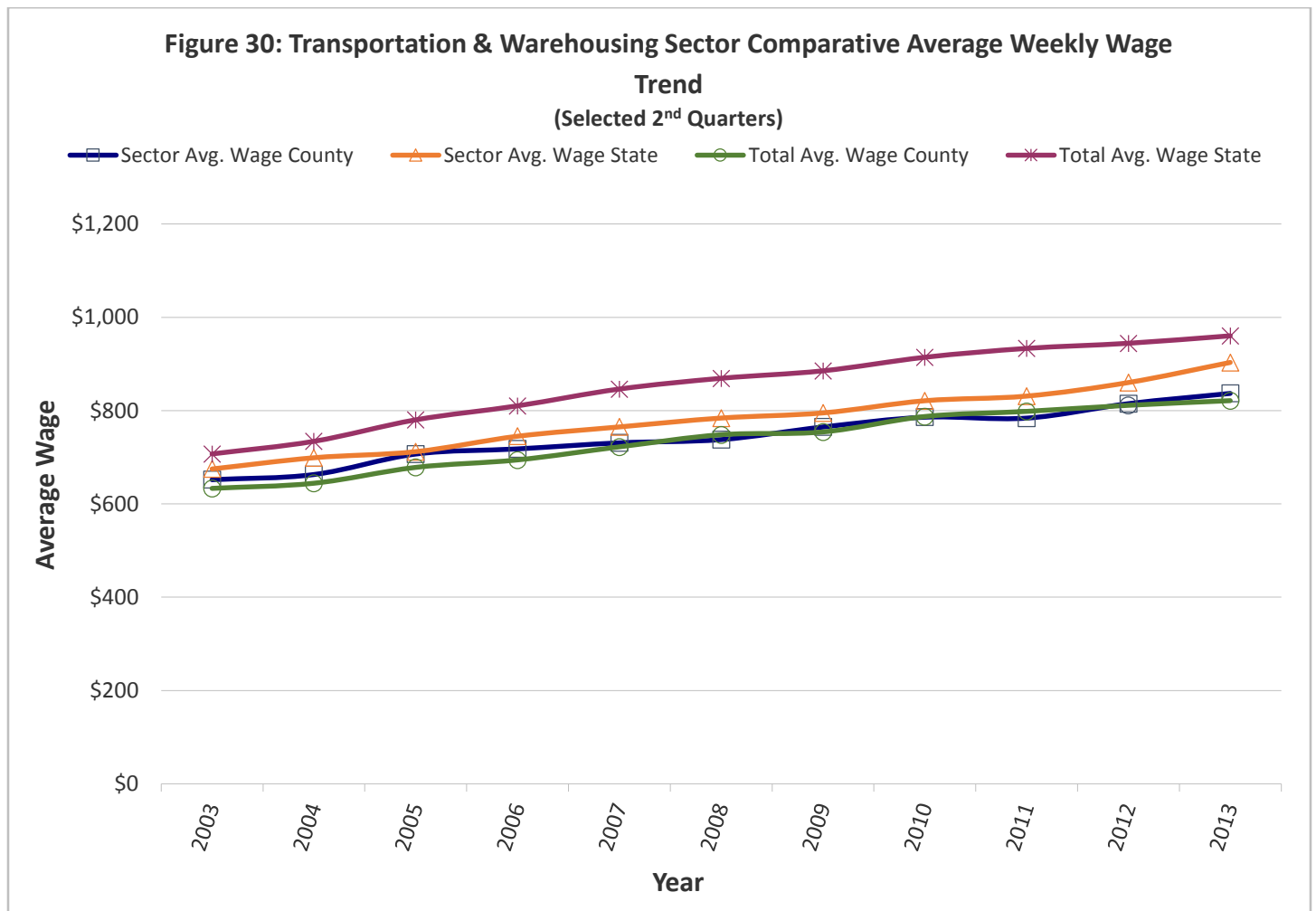
### Sector Trends

Chesterfield County had 145 (1.9 percent of the county total) establishments as reported for the second quarter of 2013, employing 4,666 persons (4.6 percent of the county total). Establishment growth in this sector has fluctuated slightly, declining most significantly between 2009 and 2010 by 6.2 percent before regaining an upward trend. The most significant increase in the number of establishments in this sector occurred between 2004 and 2005 (5.6 percent increase), and led to the highest three year spike (2005-2007) in number of establishments for the sector over the ten year period.

Employment in this sector was steadily increasing from 2003-2007, before experiencing a decline of 4.2 percent between 2007 and 2008. This decline continued through 2009 before employment regained an increasing trend and experienced a significant increase in employment between 2010 and 2013 (10.3 percent). Figure 29 below depicts these trends in greater detail.



The average weekly wage for a worker in the Transportation and Warehousing sector was \$837 as reported for the second quarter of 2013. This represents an increase of 28 percent over 2003, or an average annual increase of 2.8 percent over the ten year period. The average wage for this sector for the state of Virginia was \$903 during the second quarter of 2013, which represents an increase of 34 percent over 2003, or an average annual increase of 3.3 percent. Chesterfield's total average weekly wage was \$821, an increase of 30 percent over 2003, and Virginia's average weekly wage was \$960, representing an increase of 36 percent over 2003.



## Job Distribution

Approximately 41 percent of Transportation and Warehousing workers are employed in the General Freight Trucking industry. The Freight Transportation Arrangement industry, however, had the highest average weekly wage at \$1,044 and represented 1.5 percent of total sector employment during the second quarter of 2013.

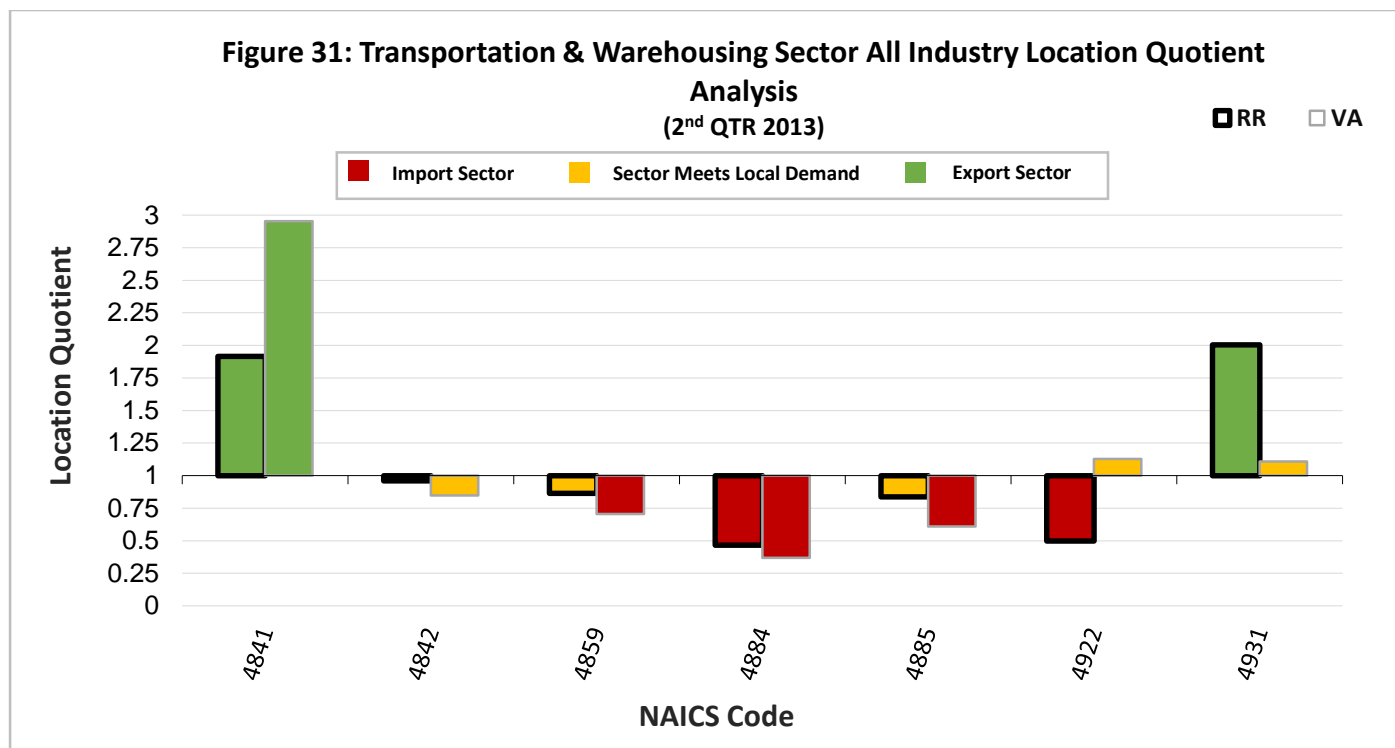
**Table 19: Transportation & Warehousing Sector; Top 5 Industry Employment (2<sup>nd</sup> QTR 2013)**

NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
4841	General Freight Trucking	1,645	50	\$909
4931	Warehousing and Storage	686	16	\$708
4842	Specialized Freight Trucking	376	30	\$664
4859	Other Transit and Ground Passenger Transportation	76	8	\$391
4885	Freight Transportation Arrangement	63	10	\$1,044

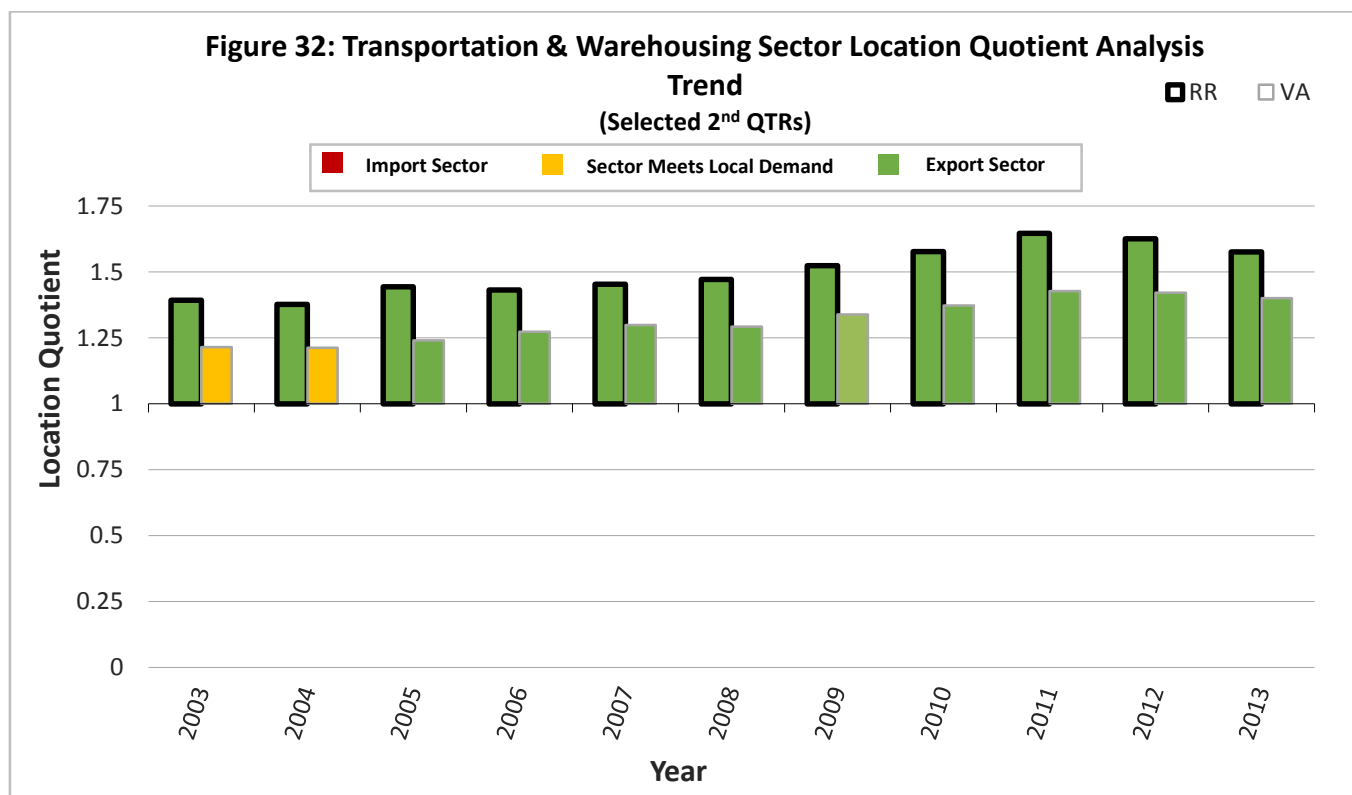
## Location Quotient Analysis

Of the eight reportable transportation sector industry groups in Chesterfield, only one is considered basic, or exporting compared to both the region and the state. The General Freight Trucking industry group (NAICS code 4841) is representative for the county at both the state and regional levels, even more so at the state level. At the regional level, the Warehousing and Storage industry group (NAICS code 4931) is representative for the county, but it only ranks as sufficient to meet local demand when compared to the state level.

Basic industries are drivers of the local economy, typically bringing in money from surrounding jurisdictions for services provided. In general, those industries reporting location quotients greater than 1.25 are most likely to be exporting their goods and services outside of the local economy, whereas those with location quotients less than 0.75 are unlikely to be sufficient to meet local demand.



Location quotient analysis of the Transportation and Warehousing sector finds that this sector has been strengthening over the ten year period from 2003-2013. This sector can be viewed as a driver of the local economy with a percentage of its goods and services ‘exported’ and meeting demand for areas outside of the county.





## Shift-Share Analysis

Employment in the Transportation and Warehousing sector in Chesterfield County declined more than expected if it were to match the state overall employment growth rate. If this sector had matched the state growth rate, it was estimated that it would add 279 jobs over the ten year period from 2003-2013. Instead, local conditions contributed to a net decline of 199 jobs for the sector. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 20: State Growth Share; Transportation & Warehousing Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Transportation and Warehousing	4,034	+6.09%	+246	+386
<b>Countywide</b>			<b>+5,596</b>	<b>+9,060</b>

The Transportation sector is a competitive industry in Chesterfield County. Local conditions contributed to the gain of 207 jobs in this sector from 2003-2013.

**Table 21: Local Competitive Share; Transportation & Warehousing Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Transportation and Warehousing	4,034	+15.67%	-2.76%	+743
<b>Countywide</b>				<b>+6,776</b>

## INFORMATION SECTOR

The information sector includes establishments engaged in the following processes:

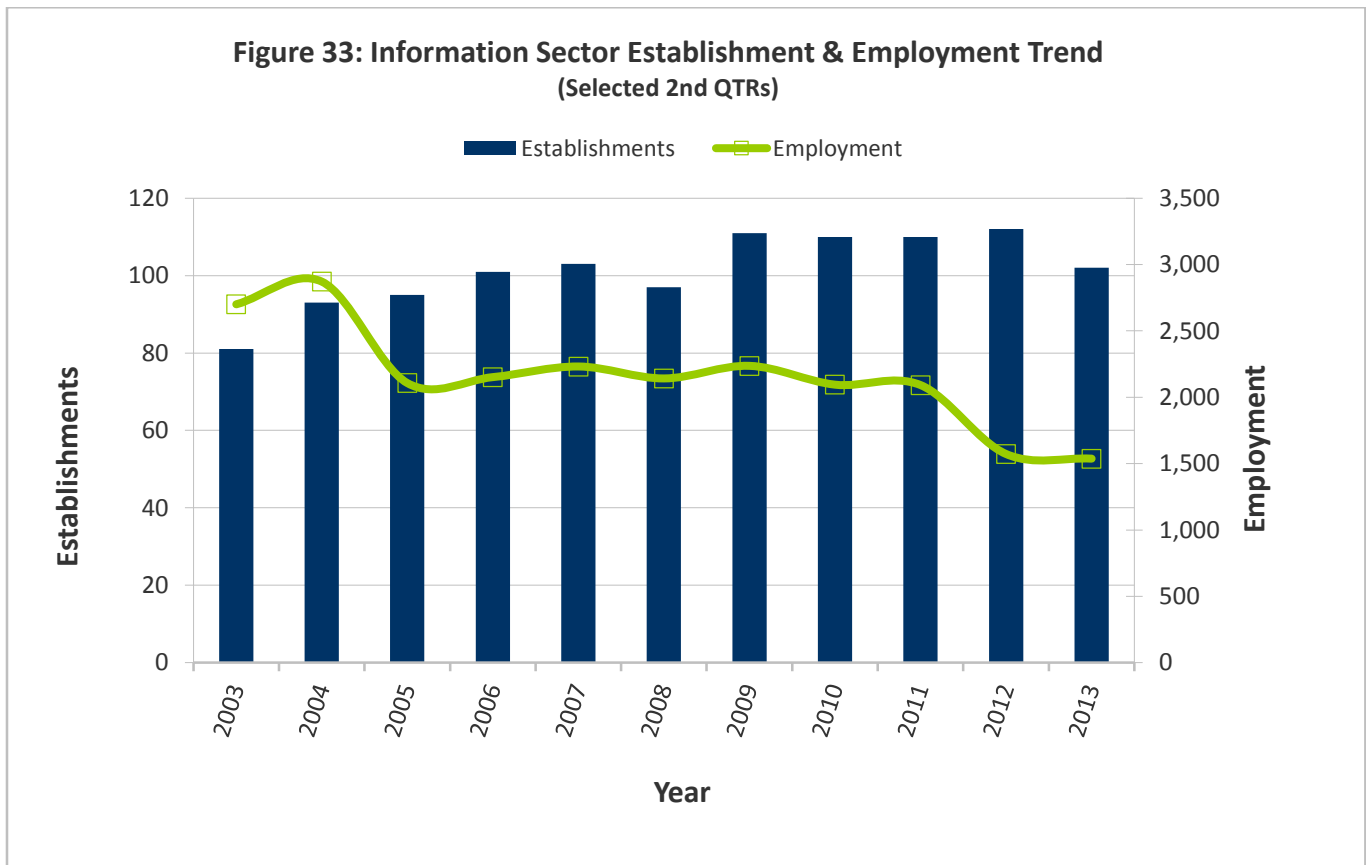
- Producing and distributing information and cultural products
- Providing the means to transmit or distribute these products as well as data or communications
- Processing data



### Sector Trends

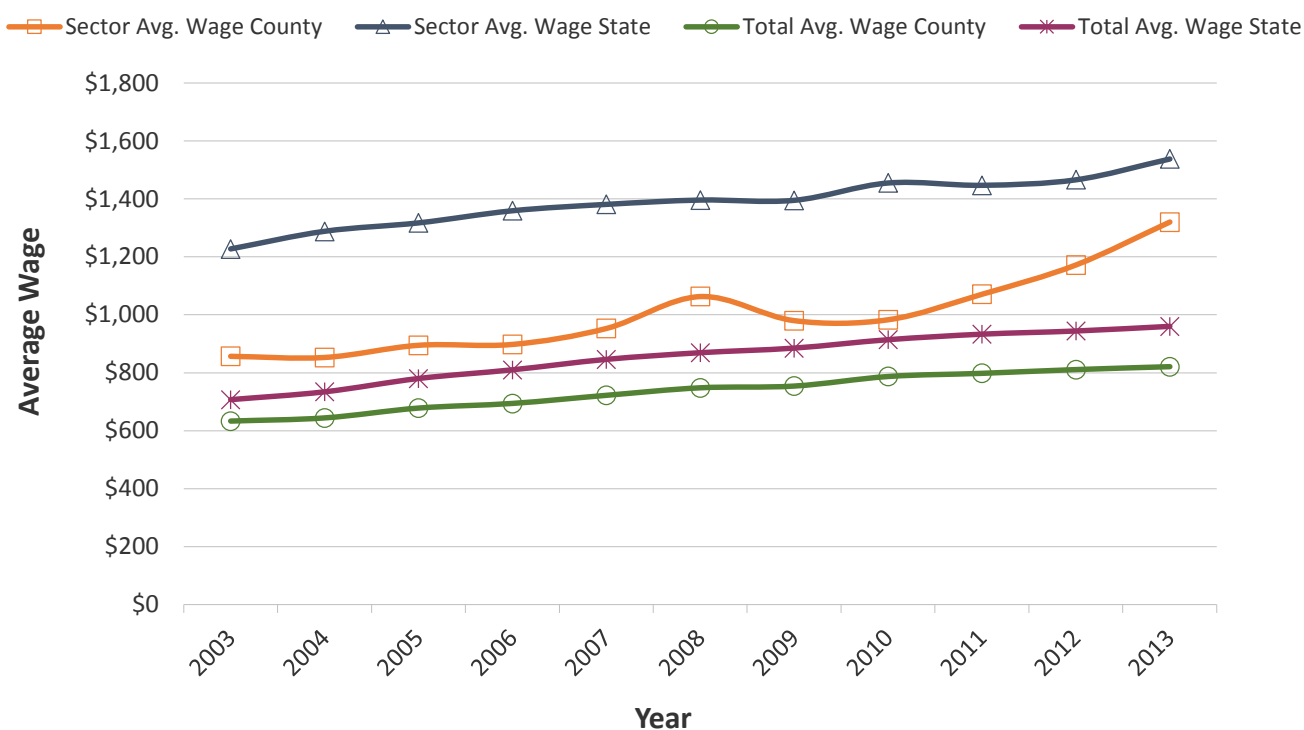
Chesterfield County had 102 establishments in this sector (1.3 percent of the county total) as reported for the second quarter of 2013, employing 1,537 persons (1.5 percent of the county total).

The number of establishments in this sector has increased 26 percent since 2003 (an average annual increase of 2.9 percent), whereas employment levels have decreased 43 percent, representing an average annual decrease in employment of 5.3 percent. These trends are depicted in further detail in figure 33 below.



The average weekly wage of a worker in the Information sector in Chesterfield County was \$1,320 as reported for the second quarter of 2013. This represents an increase of 54 percent over the 2003 average wage of \$857. The Virginia wage for this sector was \$1,538 during the second quarter of 2013, which represents a 25 percent increase over 2003. Chesterfield's total average weekly wage was \$821, an increase of 30 percent over 2003, and Virginia's average weekly wage was \$960, representing an increase of 36 percent over 2003. Wage trends for the information sector are depicted in greater detail in figure 34 (following page).

**Figure 34: Information Sector Average Weekly Wage Trend  
(Selected 2<sup>nd</sup> QTRs)**



## Job Distribution

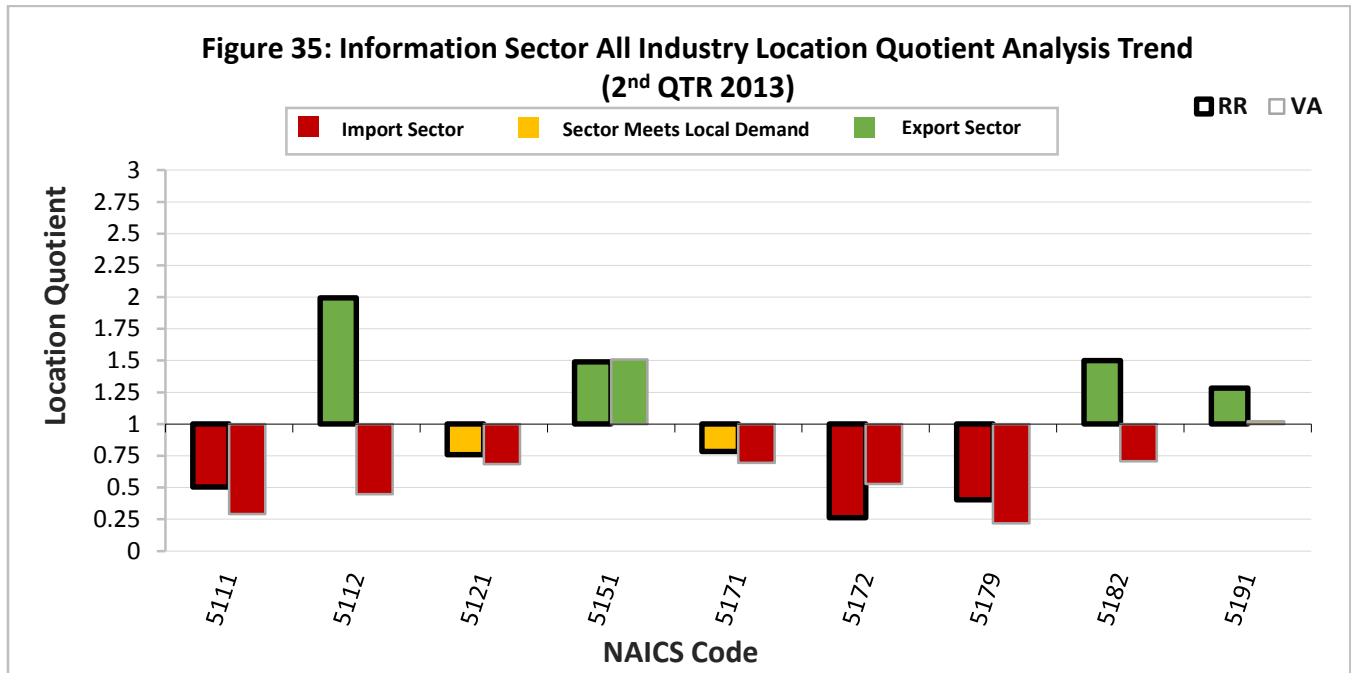
Approximately 31 percent of Information sector workers in Chesterfield County are employed in the Wired Telecommunications Carriers industry. The Software Publishers industry, however, had the highest average weekly wage for the sector at \$1,615, yet it represents only 4.8 percent of the sector's total employment and is not included as one of the top five employment industries for the sector.

**Table 22: Information Sector; Top 5 Industry Employment (2<sup>nd</sup> QTR 2013)**

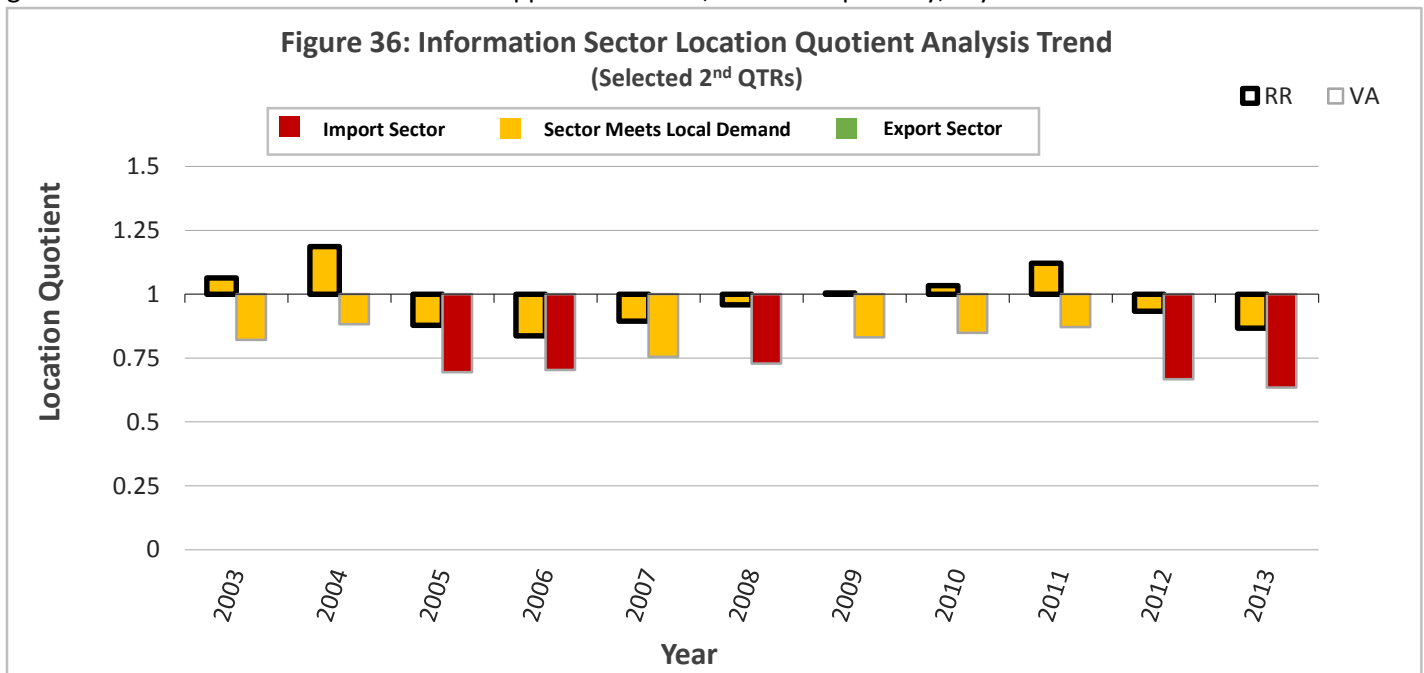
NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
5171	Wired Telecommunications Carriers	476	22	\$1,558
5151	Radio and Television Broadcasting	291	6	\$1,262
5182	Data Processing, Hosting, and Related Services	252	14	\$1,585
5191	Other Information Services	128	16	\$1,448
5121	Motion Picture and Video Industries	120	6	\$191

## Location Quotient Analysis

Of the nine reportable information sector industry groups in Chesterfield, one is considered basic, or exporting, when compared with both the state and the region. The Radio and Television Broadcasting industry group (NAICS code 5151) is representative of the county at both the regional and state levels. The Software Publishers (NAICS code 5112); Data Processing, Hosting, and Related Services (NAICS code 5182); and Other Information Services (NAICS code 5191) industry groups were representative of the county at the regional level but not at the state level. Basic industries are drivers of the local economy, typically bringing in money from surrounding jurisdictions for services provided.



Location quotient analysis of the Information sector for Chesterfield county finds that this industry had been strengthening since 2005, but weakened significantly from 2011-2013. The weakness of this sector in Chesterfield suggests that the goods and services that this sector supplies are met, at least partially, by businesses outside of the county.



## Shift-Share Analysis

Employment in this sector in Chesterfield County grew slower than the overall average growth of the state economy. If this sector had matched the state overall growth rate for all industries, it would have added 165 jobs over the course of the ten year period from 2003-2013, but instead experienced a net loss of 1,329 jobs. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 23: State Growth Share; Information Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Information	2,701	+6.09%	+165	-1,329
<b>Countywide</b>			<b>+5,596</b>	<b>+9,060</b>

The information sector has lost competitiveness in Chesterfield County. Local conditions contributed to the non-realization of 388 jobs in this sector from 2003-2013. Chesterfield County overall is a highly competitive jurisdiction within the state, with local conditions resulting in the realization of 6,776 jobs above the state average.

**Table 24: Local Competitive Share; Information Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Information	2,701	-43.10%	-28.71%	-388
<b>Countywide</b>				<b>+6,776</b>

## FINANCE AND INSURANCE SECTOR

The Finance and Insurance sector includes establishments primarily engaged in:

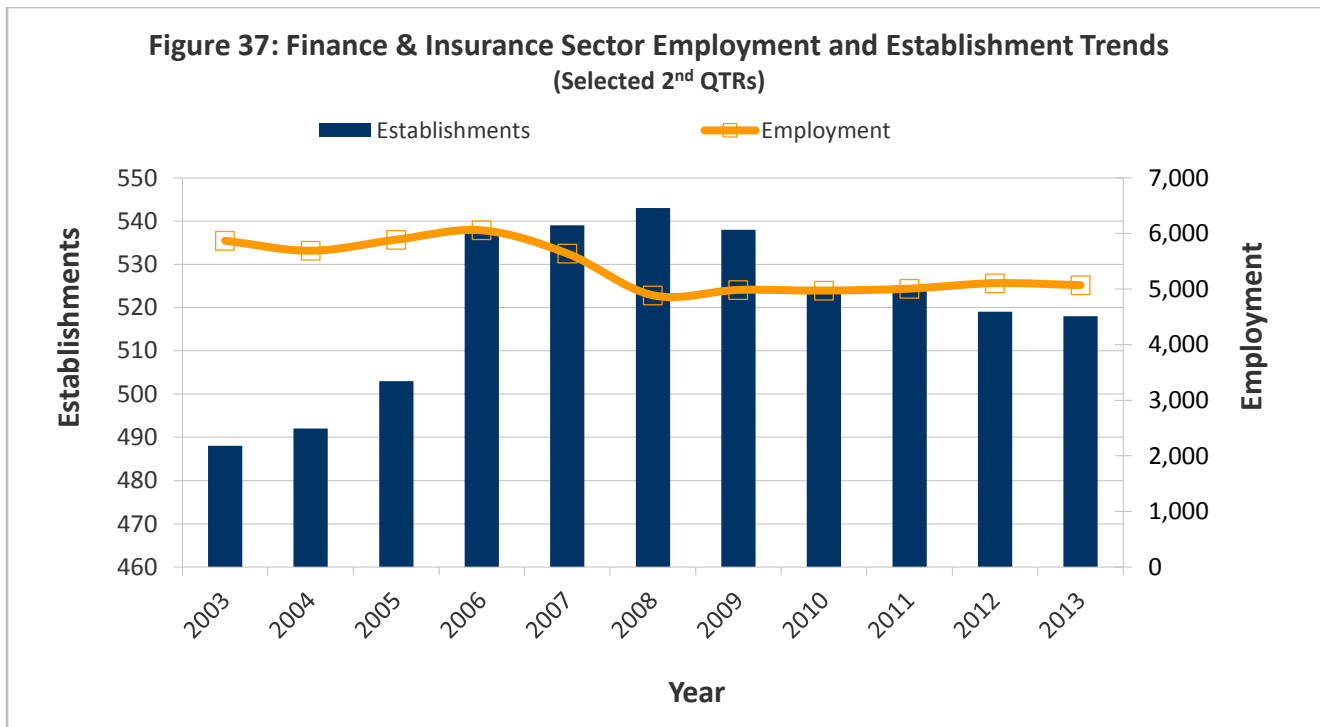
- Financial transactions (transactions involving the creation, liquidation, or change in ownership of financial assets) and/or in
- Facilitation financial transactions.



### Sector Trends

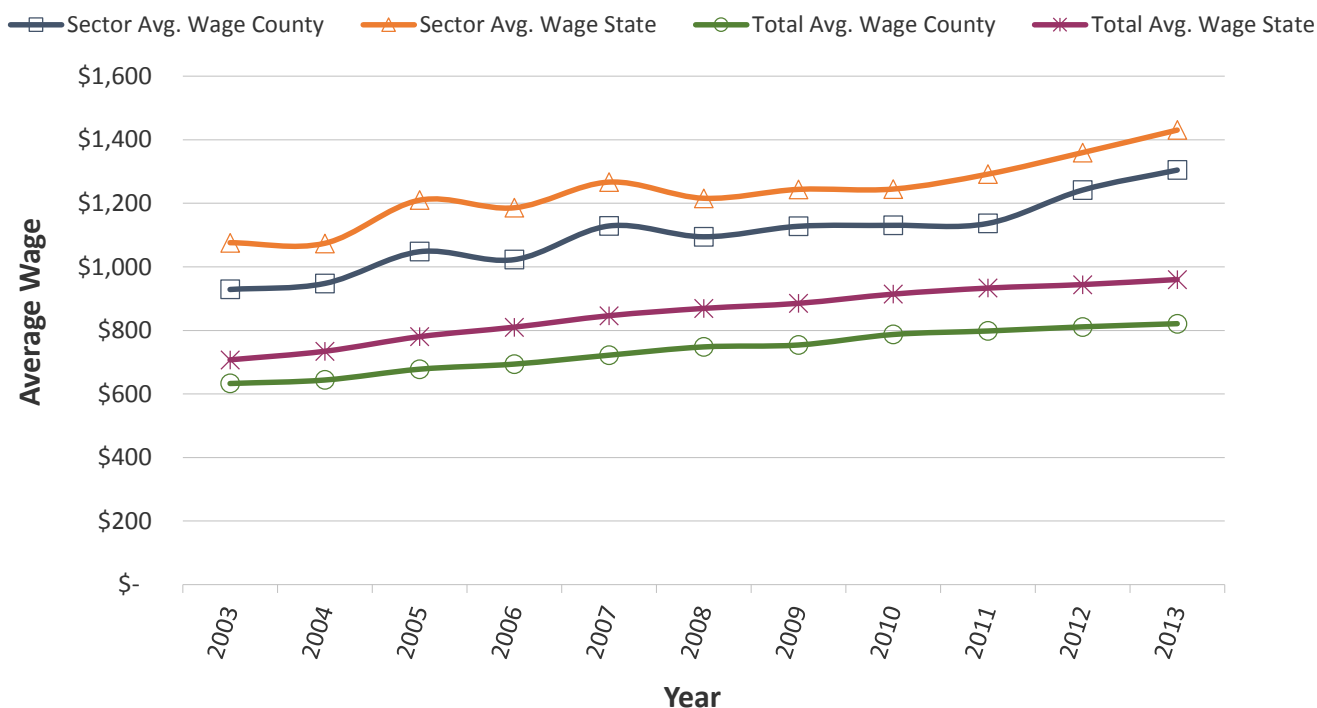
Chesterfield had 518 establishments in the Finance and Insurance sector (6.8 percent of the county total) as reported for the second quarter of 2013, employing 5,070 persons (5.0 percent of the county total).

The number of establishments in this sector has increased 6.2 percent since 2003, while employment has decreased by 13.6 percent, or an average of 1.5 percent annually. These trends are depicted in further detail in figure 37 below.



The average weekly wage of a worker in the Finance and Insurance sector was \$1,305 during the second quarter of 2013. This represents an increase of approximately 41 percent over 2003, or an average annual increase of 3.9 percent. The Virginia wage for this sector was \$1,431 for the same quarter, which represents an increase of 33 percent since 2003, or an average annual increase of 3.3 percent. Chesterfield's total average weekly wage was \$821, an increase of 30 percent over 2003, and Virginia's average weekly wage was \$960, representing an increase of 36 percent over 2003. Wage trends for the information sector are depicted in greater detail in figure 38 (following page).

**Figure 38: Finance & Insurance Sector Comparative Average Weekly Wage Trend  
(Selected 2<sup>nd</sup> QTRs)**



## Job Distribution

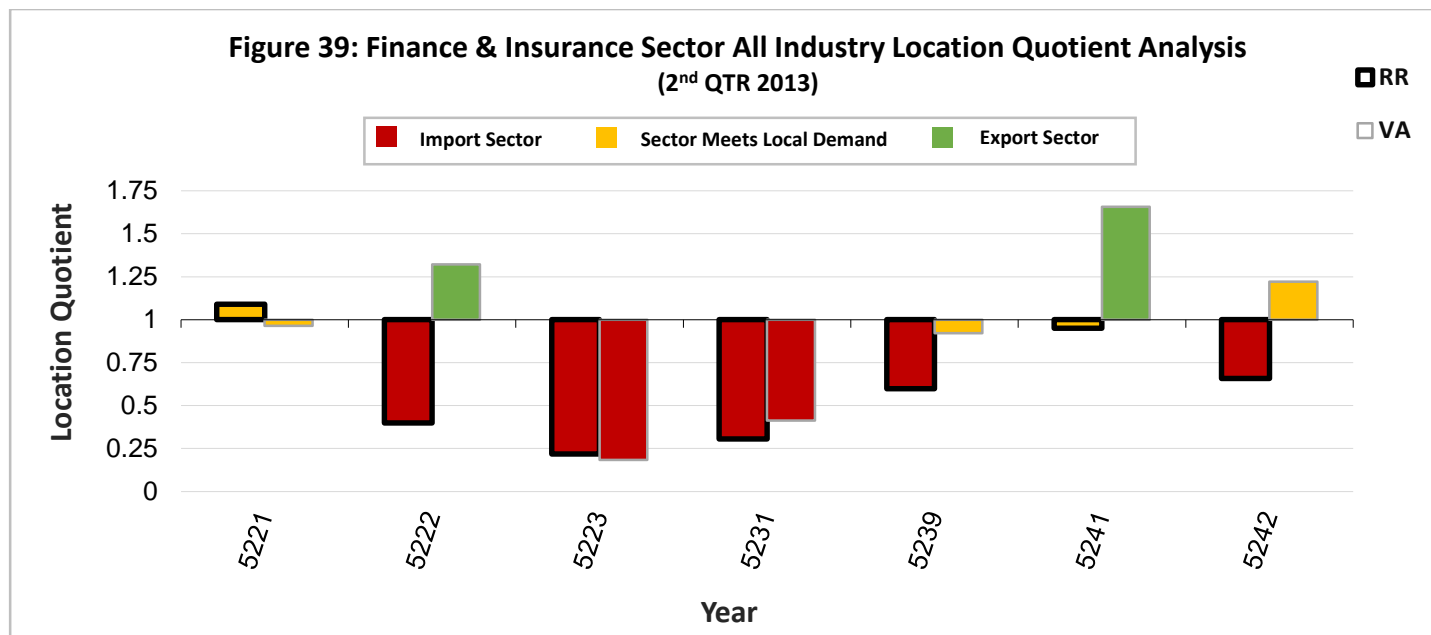
Approximately 25 percent of Finance and Insurance sector workers in Chesterfield County were employed in the Insurance Carriers industry group for the second quarter of 2013. The Other Financial Investment Activities group, however provided the sector's highest average weekly wage at \$2,494, yet provides only 3.5 percent of total sector employment for the county. The Other Financial Investment Activities Group is considered one of the top five industry employment groups for the sector.

**Table 25: Finance and Insurance Sector; Top 5 Industry Employment 2<sup>nd</sup> QTR 2013**

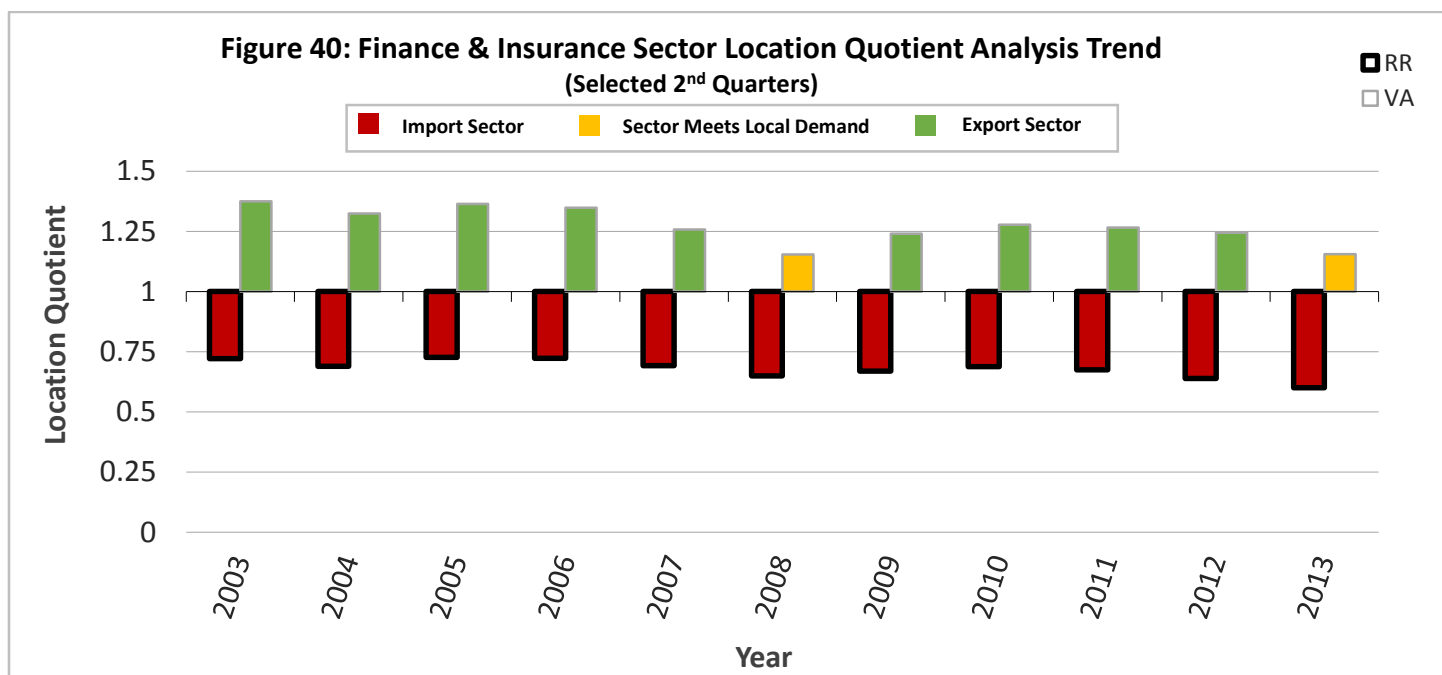
NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
5241	Insurance Carriers	1,464	66	\$1,369
5222	Nondepository Credit Intermediation	1,402	30	\$1,175
5221	Depository Credit Intermediation	1,095	113	\$847
5242	Agencies, Brokerages, and Other Insurance Related Activities	792	212	\$1,723
5239	Other Financial Investment Activities	208	56	\$2,494

## Location Quotient Analysis

Of the seven reportable Finance and Insurance sector industry groups in Chesterfield County, none are considered basic, or exporting when compared to both the state and region. Basic industries are drivers of the local economy, typically bringing in money from surrounding jurisdictions for services provided.



Overall this sector has declined in strength since 2003, with the greatest decline occurring from 2006-2008. Though weak in comparison to the region, this sector is stable within the context of the state as the region is a banking center.





## Shift-Share Analysis

Employment in the Finance and Insurance sector grew more slowly than the overall average of the state economy. If this sector had matched the state overall growth rate for all industries, it would have added 358 jobs over the ten year period from 2003-2013, but instead lost 1,159 jobs. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 26: State Growth Share; Finance and Insurance Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Finance and Insurance	5,871	+6.09%	+358	-1,159
<b>Countywide</b>			<b>+5,596</b>	<b>+9,060</b>

The Finance sector lost competitiveness from 2003-2013. Local conditions contributed to the non-realization of 767 jobs in this sector over the ten year period. Chesterfield County overall is a highly competitive jurisdiction within the state, with local conditions contributing to the realization of 6,776 jobs above the state average.

**Table 27: Local Competitive Share; Finance and Insurance Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Finance and Insurance	5,871	-13.64%	-0.57%	-767
<b>Countywide</b>				<b>+6,776</b>

## REAL ESTATE AND RENTAL AND LEASING SECTOR

The Real Estate and Rental and Leasing sector comprises establishments primarily engaged in:

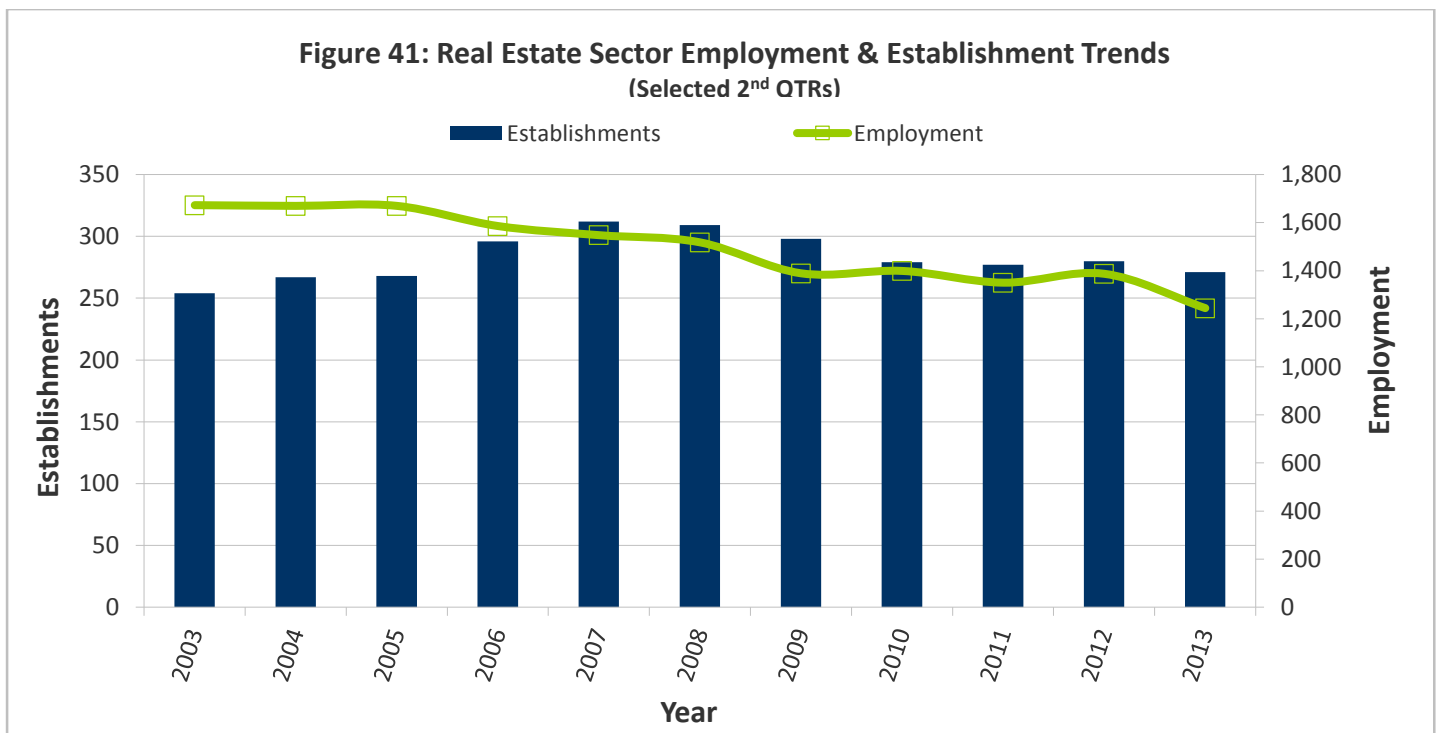
- Renting, leasing, or otherwise allowing the use of tangible or intangible assets (represents the majority of establishments)
- Providing related services



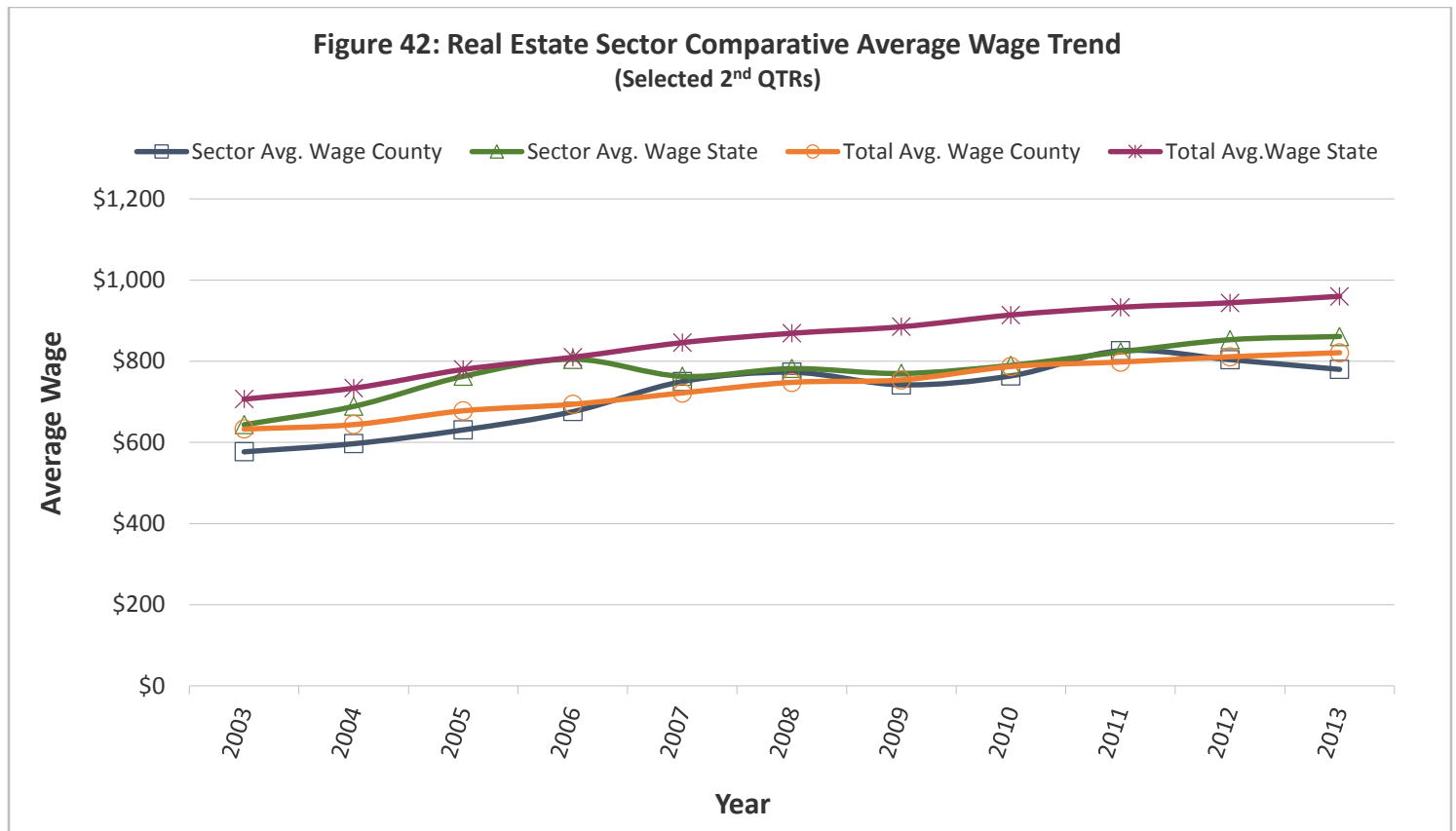
### Sector Trends

Chesterfield had 271 establishments (3.6 percent of the county total) as reported for the second quarter of 2013, employing 1,244 persons (1.2 percent of the county total). The number of establishments in this sector has grown by 6.7 percent, or an average annual decrease of less than one percent. The most significant decline in establishments occurred between 2012 and 2013, and resulted in an overall annual decrease of 3.2 percent.

Employment decreased by 25.6 percent over the ten year period from 2003-2013, which represents an average annual decrease of 3.2 percent. Employment levels were relatively stable from 2003-2005, yet these levels began to experience a downward trend beginning in 2006 and continuing through 2013. The most significant decrease in employment occurred between 2012 and 2013 and resulted in an overall annual decrease of 10.3 percent. Employment also saw a relatively significant decrease between 2008 and 2009 which resulted in an annual decrease of 8.5 percent. This first significant decrease could be explained by the weak housing market during the recession, and market trends could also explain the continuously decreasing trend following this initial decline.



The average weekly wage of a worker in the Real Estate and Rental and Leasing sector in Chesterfield County was \$780 as reported for the second quarter of 2013. This represents an overall increase of 35 percent over 2003, or an average annual increase of 3.5 percent. The Virginia wage for this sector was \$861 for the second quarter of 2013, which represents an overall increase of approximately 34 percent over 2003, or an average annual increase of 3.4 percent. Chesterfield’s total average weekly wage was \$821, an increase of 30 percent over 2003, and Virginia’s average weekly wage was \$960, representing an increase of 36 percent over 2003. Wage trends for the information sector are depicted in greater detail in figure 42 below.



## Job Distribution

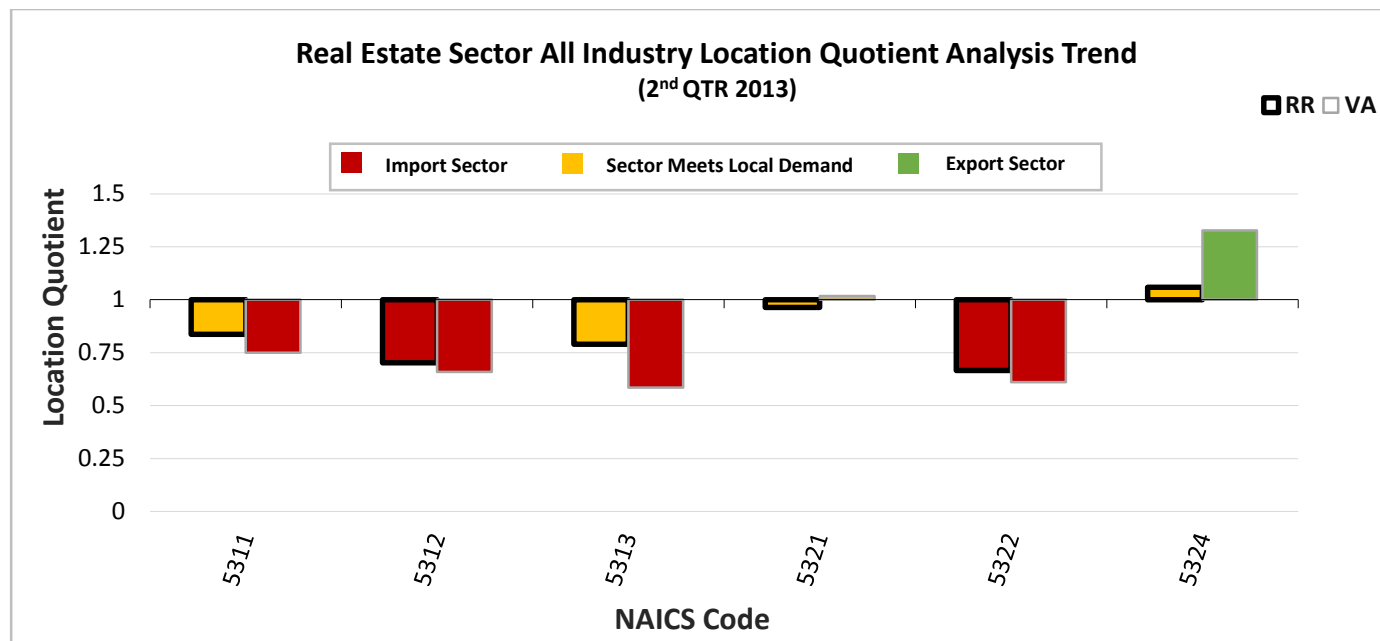
Approximately 21 percent of Real Estate sector workers in Chesterfield County are employed in the Lessors of Real Estate industry group. However, the highest paying industry in this sector was Commercial and Industrial Machinery and Equipment Rental Leasing with an average weekly wage of \$1,079. This industry group accounts for 6.3 percent of total sector employment and is included as one of the top five employment industries for this sector within the county.

**Table 28: Real Estate Sector; Top 5 Industry Employment 2<sup>nd</sup> QTR 2013**

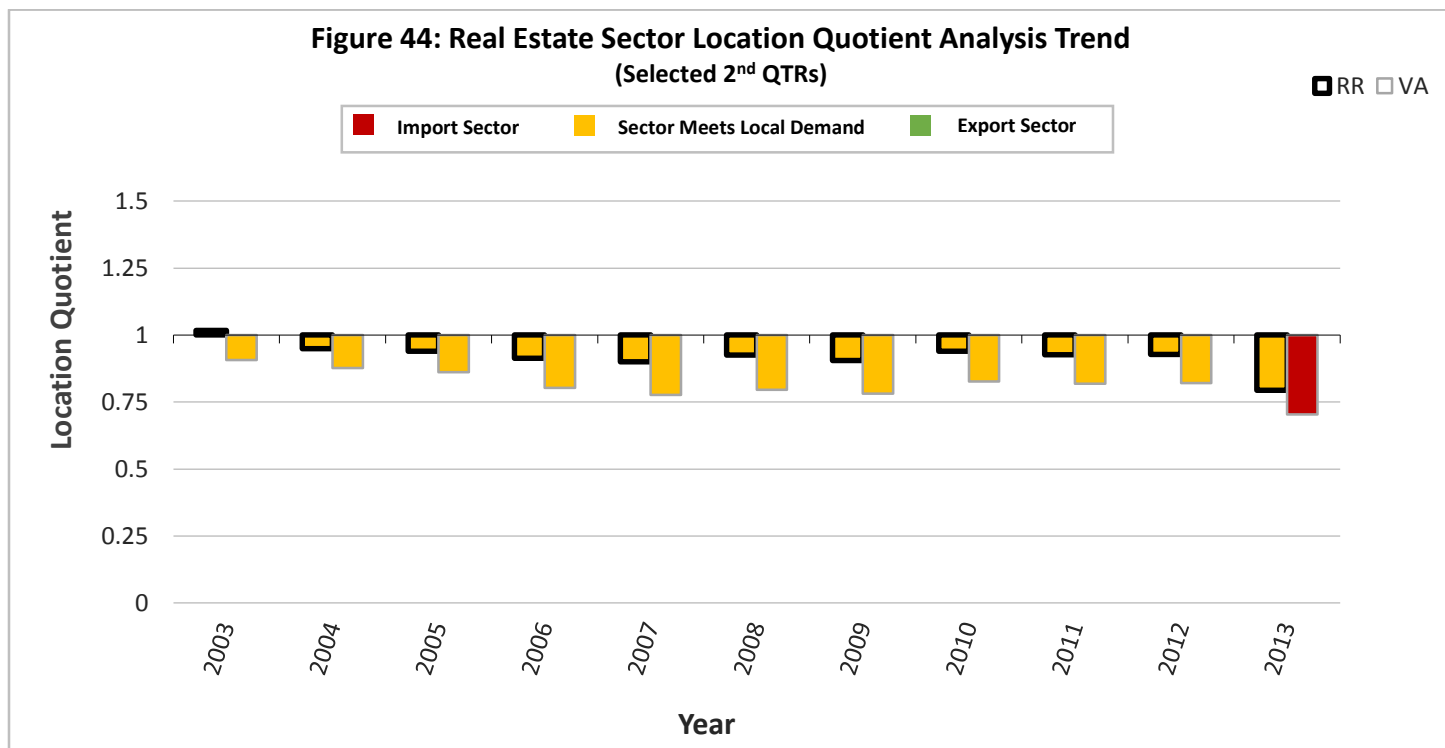
NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
5311	Lessors of Real Estate	350	71	\$587
5313	Activities Related to Real Estate	332	67	\$967
5312	Offices of Real Estate Agents and Brokers	206	84	\$762
5321	Automotive Equipment and Rental Leasing	160	21	\$672
5324	Commercial and Industrial Machinery and Equipment Rental Leasing	105	11	\$1,079

## Location Quotient Analysis

Of the six reportable Real Estate sector industry groups in Chesterfield, none are considered basic, or exporting. Basic industries are drivers of the local economy, typically bringing in money from surrounding jurisdictions for services provided.



Location quotient analysis for the Real Estate and Rental and Leasing sector finds that the strength of this industry in the local economy has been in decline since 2003 but is beginning to level out. This sector's industries are considered sufficient to meet local demand, thus the sector is neither a basic (exporter) nor non-basic (importer) sector.



## Shift-Share Analysis

Employment in the Real Estate sector in Chesterfield County grew more slowly than the overall average of the state economy. If county growth in this sector had matched the state overall growth rate for all industries, the sector would have added 102 jobs over the ten year period from 2003-2013, but instead lost 531 jobs. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 29: State Growth Share; Real Estate and Rental Leasing Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Real Estate & Rental & Leasing	1,673	+6.09%	+102	-531
<b>Countywide</b>			<b>+5,596</b>	<b>+9,060</b>

The Real Estate sector lost competitiveness in Chesterfield County. Local conditions contributed to the non-realization of 305 jobs in this sector from 2003-2013. Chesterfield County overall is a highly competitive jurisdiction within the state, with local conditions resulting in the realization of 6,776 jobs above the state average.

**Table 30: Local Competitive Share; Real Estate and Rental and Leasing Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Finance and Insurance	1,637	-25.64%	-7.40%	-305
<b>Countywide</b>				<b>+6,776</b>

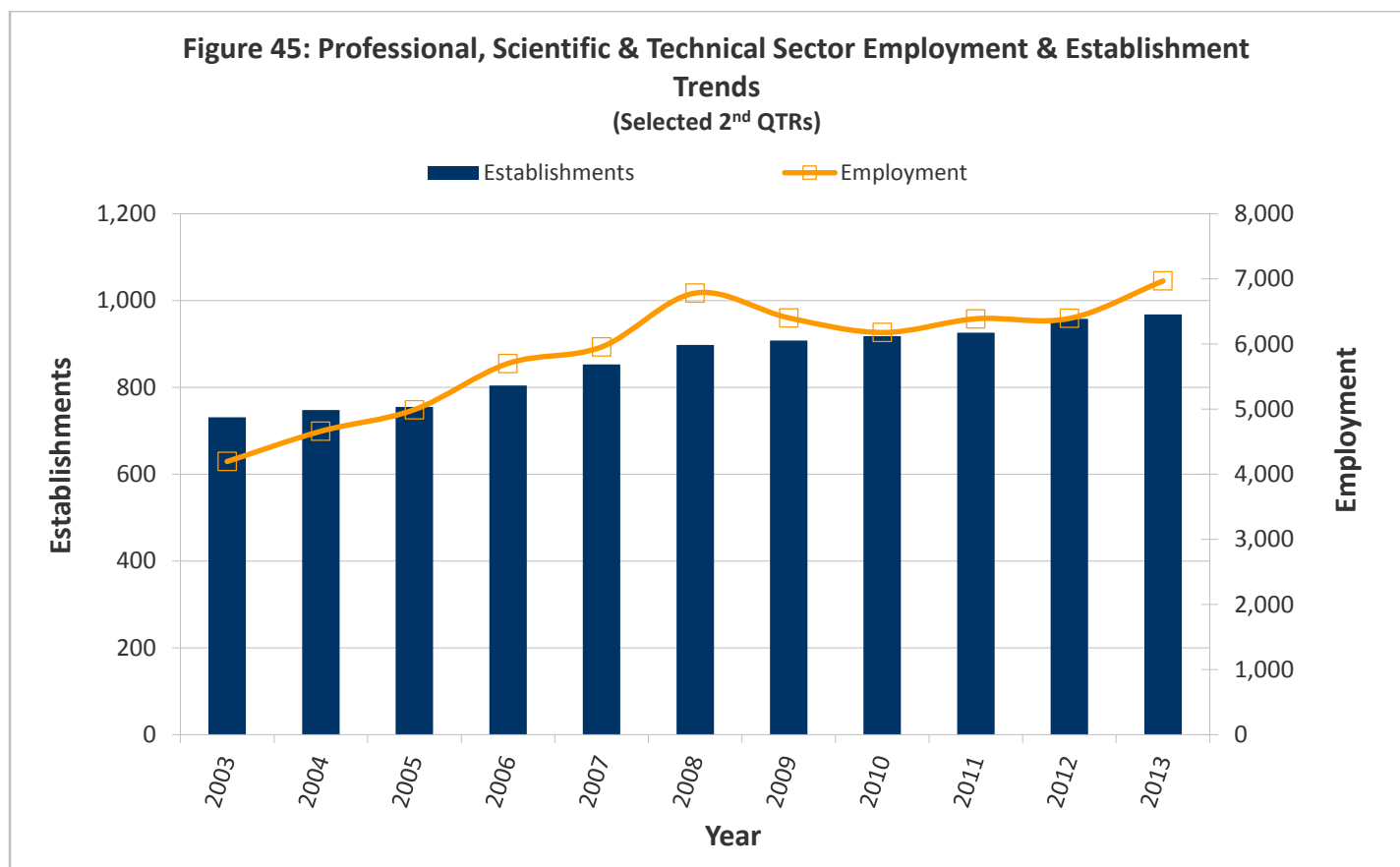
## PROFESSIONAL, SCIENTIFIC, AND TECHNICAL SERVICES SECTOR

The Professional, Scientific, and Technical Services sector consists of establishments that specialize in performing professional, scientific, and technical activities for others. These activities require a high degree of expertise and training. Establishments in this sector specialize according to expertise and provide these services to clients in a variety of industries and, in some cases, to households.

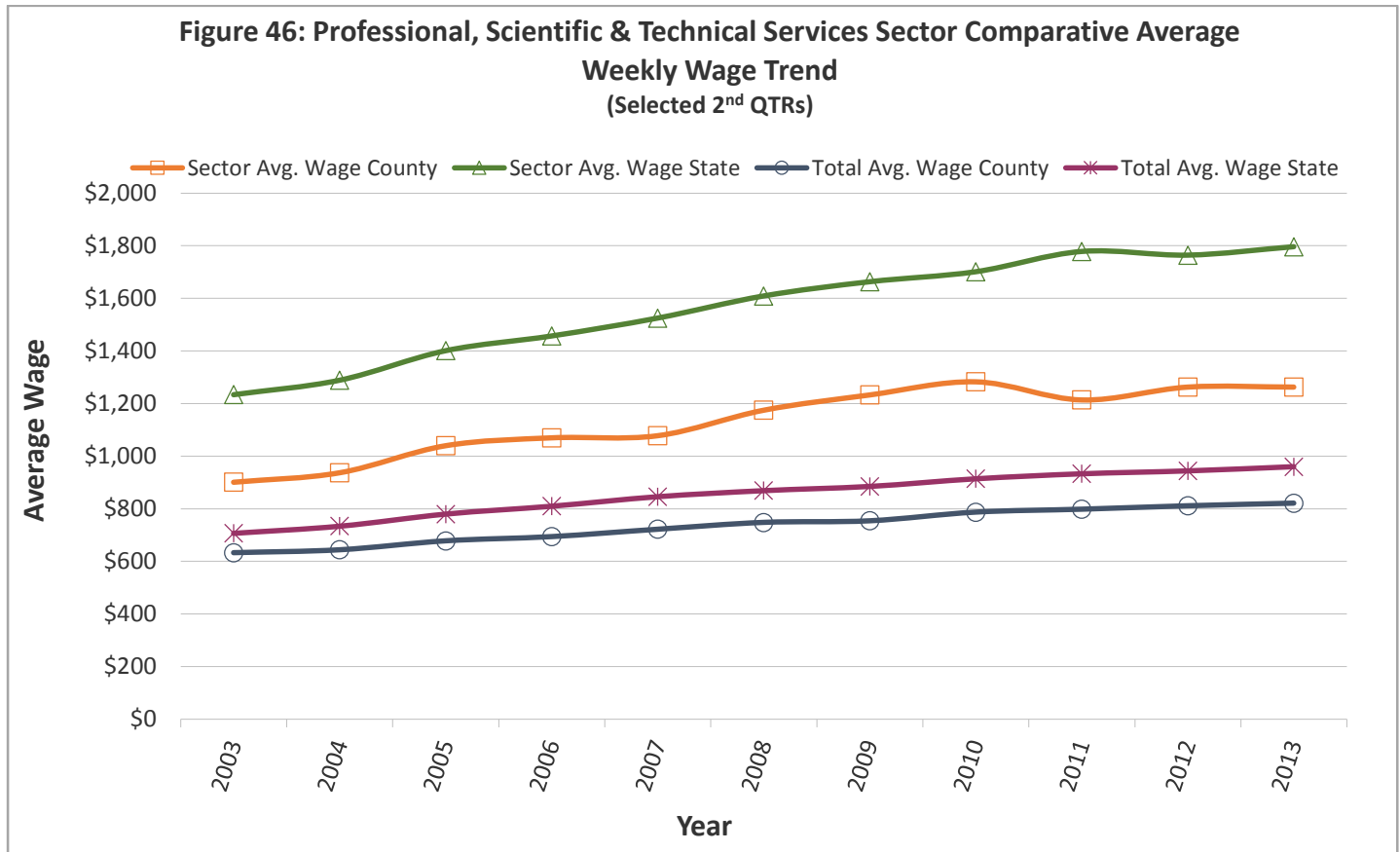


### Sector Trends

Chesterfield had 968 establishments (12.7 percent of the county total) in this sector during the second quarter of 2013, employing 6,969 persons (6.9 percent of the county total). The number of establishments in this sector has grown by 32 percent since 2003, which represents an annual increase of 3.2 percent. Employment in this sector has exhibited a relatively consistent upward trend from 2003-2008, reaching a peak in 2008 at 6,782 persons. Following this 2008 high, employment in this sector declined slightly and then stabilized before peaking again in 2013. Overall, employment in this sector increased by 66 percent over the ten year period from 2003-2013, which represents an annual change of 6.0 percent.



The average weekly wage of a worker in the Professional, Scientific, and Technical Services sector was \$1,263 as reported for the second quarter of 2013, which represents an increase of 40 percent over the ten year period from 2003-2013, or an average annual increase of 3.9 percent. The Virginia average wage for this sector was \$1,796 for the second quarter of 2013, an increase of 46 percent over 2003, or an average annual increase of 4.3 percent. Chesterfield's total average weekly wage was \$821, an increase of 30 percent over 2003, and Virginia's average weekly wage was \$960, representing an increase of 36 percent over 2003. Wage trends for the information sector are depicted in greater detail in figure 46 below.





## Job Distribution

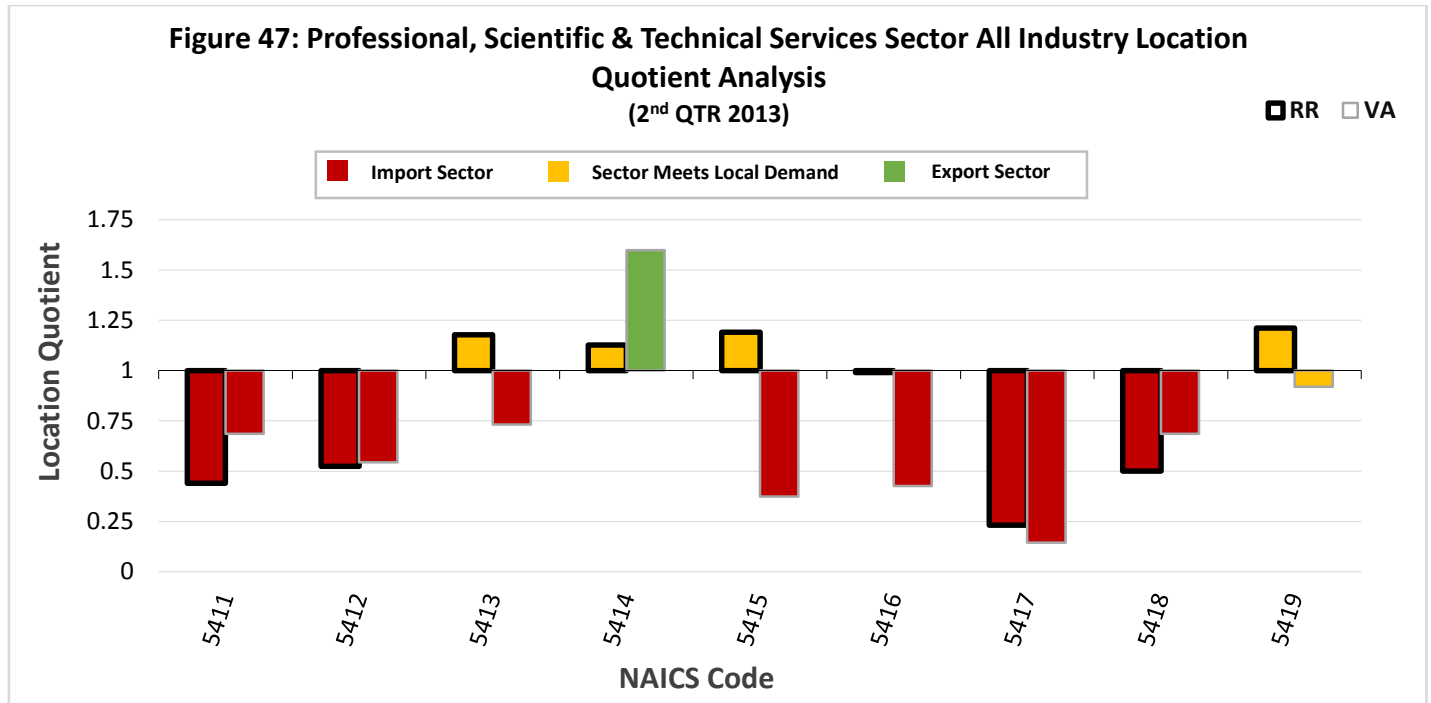
Approximately 27 percent of this sector's employment is concentrated in the Computer Systems Design and Related Services industry group. Accounting, Tax Preparation, and Bookkeeping Services is the highest-paying industry in this sector with an average weekly wage of \$1,865 and employs just over nine percent of the sector's workers.

**Table 31: Professional Services Sector; Top 5 Industry Employment 2<sup>nd</sup> QTR 2013**

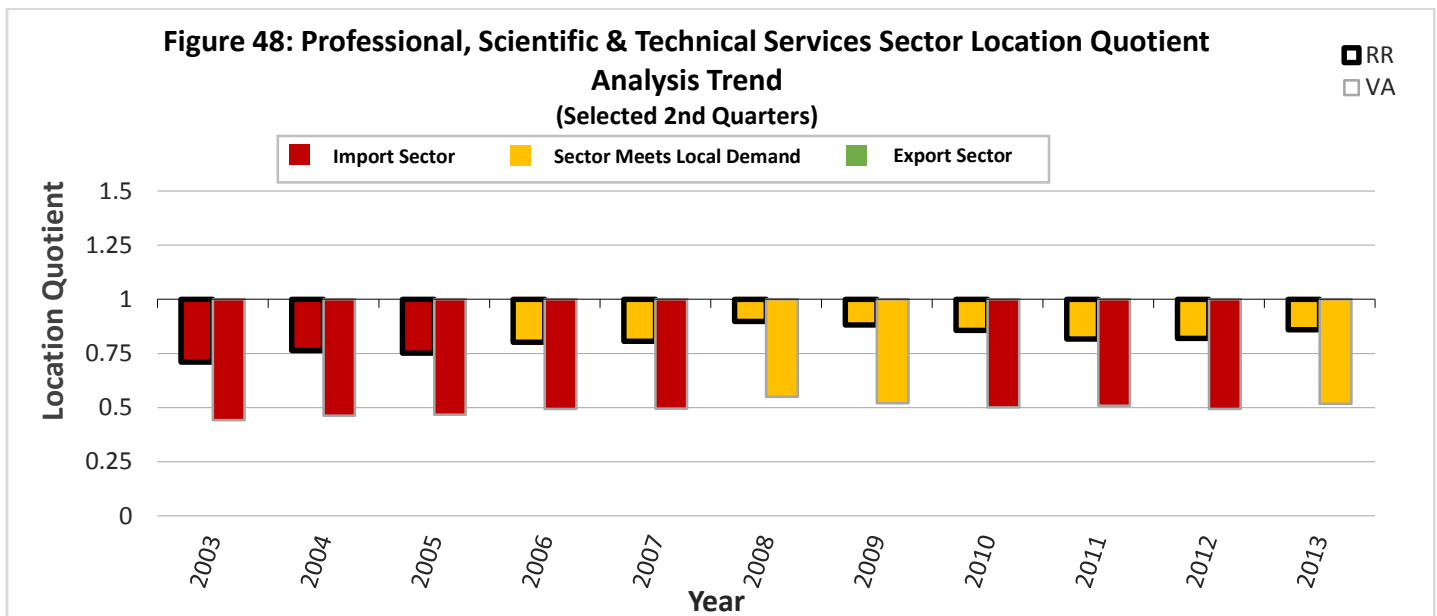
NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
<b>5415</b>	Computer Systems Design and Related Services	1,884	205	\$1,253
<b>5413</b>	Architectural, Engineering, and Related Services	1,637	139	\$1,422
<b>5416</b>	Management, Scientific, and Technical Consulting Services	1,056	208	\$1,215
<b>5419</b>	Other Professional, Scientific, and Technical Services	641	88	\$921
<b>5412</b>	Accounting, Tax Preparation, and Bookkeeping Services	637	129	\$1,865

## Location Quotient Analysis

Of the nine reportable Professional sector industry groups in Chesterfield, none are considered basic, or exporting compared to both the region and the state. Basic industries are drivers of the local economy, typically bringing in money from surrounding jurisdictions for services provided.



Location quotient analysis of the Professional sector finds that this sector had been slowly increasing up until 2008, after which it began to decline. It remains a relatively weak sector of the local economy with most of the services being consumed by the local population and some services 'imported' from businesses in other jurisdictions.



## Shift-Share Analysis

Employment in this sector in Chesterfield grew faster than the overall average of the state economy. If this sector had matched the state overall growth rate for all industries, it would have added 255 jobs over the ten year period from 2003-2013, but instead added 2,519 jobs. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 32: State Growth Share; Professional Services Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Professional, Scientific & Technical Services Sector	4,195	+6.09%	+255	+2,519
<b>Countywide</b>			<b>+5,596</b>	<b>+9,060</b>

The Professional sector is a highly competitive industry in Chesterfield County. Local conditions contributed to the addition of 1,215 jobs from 2003-2013. Chesterfield County overall is a highly competitive jurisdiction within the state, with local conditions resulting in the realization of 6,776 jobs above the state average.

**Table 33: Local Competitive Share; Professional Services Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Professional, Scientific & Technical Services Sector	4,195	+66.13%	+37.16%	+1,215
<b>Countywide</b>				<b>+6,776</b>

## MANAGEMENT OF COMPANIES AND ENTERPRISES SECTOR

The Management of Companies and Enterprises sector consists of establishments that hold the securities of companies for the purpose of:

- Owning a controlling interest or influencing management decisions
- Administer, oversee, and manage establishments of the company or enterprise
- Undertake the strategic or organizational planning and decision-making role of the company.

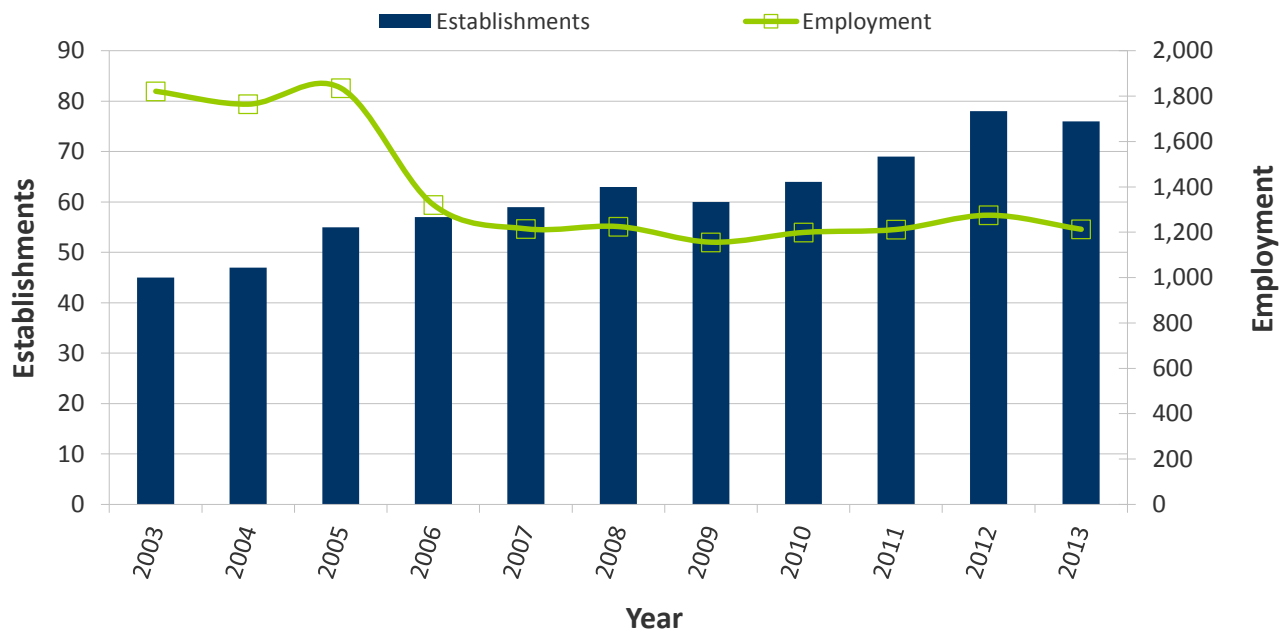


### Sector Trends

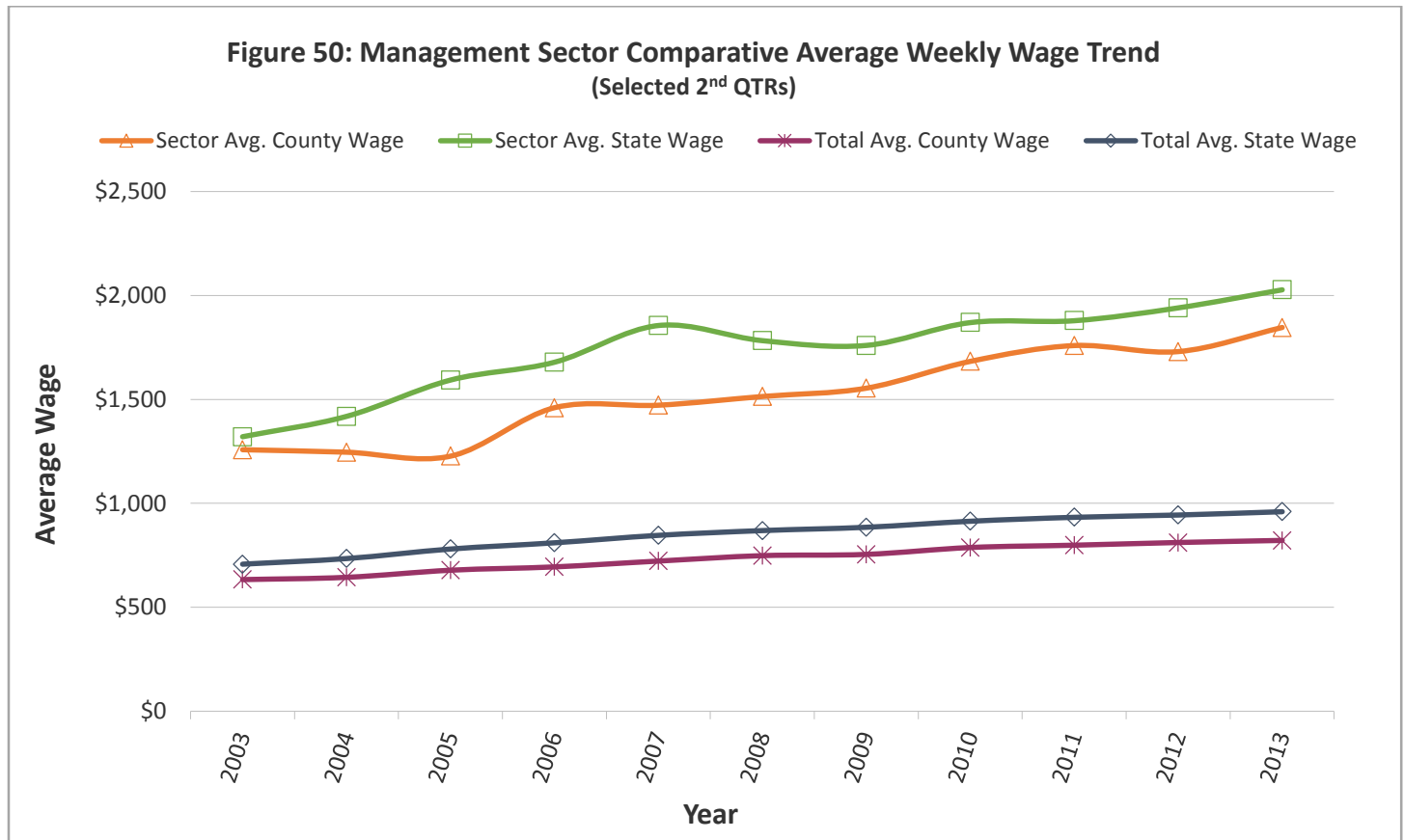
Chesterfield had 76 establishments (one percent of the county total) in this sector as reported for the second quarter of 2013, which represents a 69 percent increase over 2003, or a 6.2 percent average annual increase. Chesterfield County establishments in this sector employed 1,213 persons in this sector for the second quarter of 2013 (1.2 percent of the county total), which represents a 33 percent decrease over 2003, or an average annual decrease of 3.9 percent.

Although the number of establishments in this sector has steadily increased from 2003-2010, with only slight fluctuations, employment experienced a high point from 2003-2005 before declining sharply from 2005-2006 (28 percent) and continuing on a slight downward trend until 2013.

**Figure 49: Management Sector Employment & Establishment Trends**  
(Selected 2<sup>nd</sup> QTRs)



The average weekly wage of a worker in the Management sector in Chesterfield was \$1,846 as reported for the second quarter of 2013. This represents an increase of 47 percent over 2003, or an average annual increase of 4.5 percent. The Virginia average weekly wage for this sector during the second quarter of 2013 was \$2,028, which represents an increase of 54 percent over 2003, or an average annual increase of five percent. . Chesterfield's total average weekly wage was \$821, an increase of 30 percent over 2003, and Virginia's average weekly wage was \$960, representing an increase of 36 percent over 2003. Wage trends for the information sector are depicted in greater detail in figure 50 below.



## Job Distribution

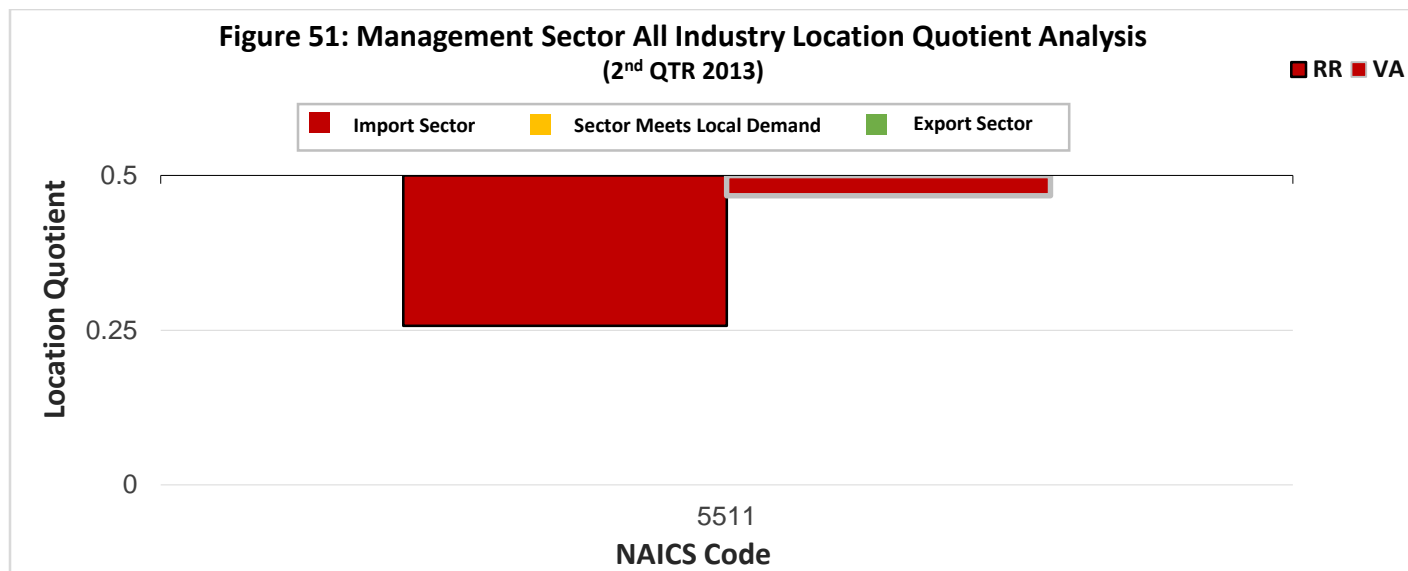
All workers in the Management of Companies and Enterprises Sector work in the Management of Companies and Enterprises industry group. This industry had an average weekly wage of \$1,846 as reported for the second quarter of 2013.

**Table 34: Management Sector Top Industry Employment 2nd QTR 2013**

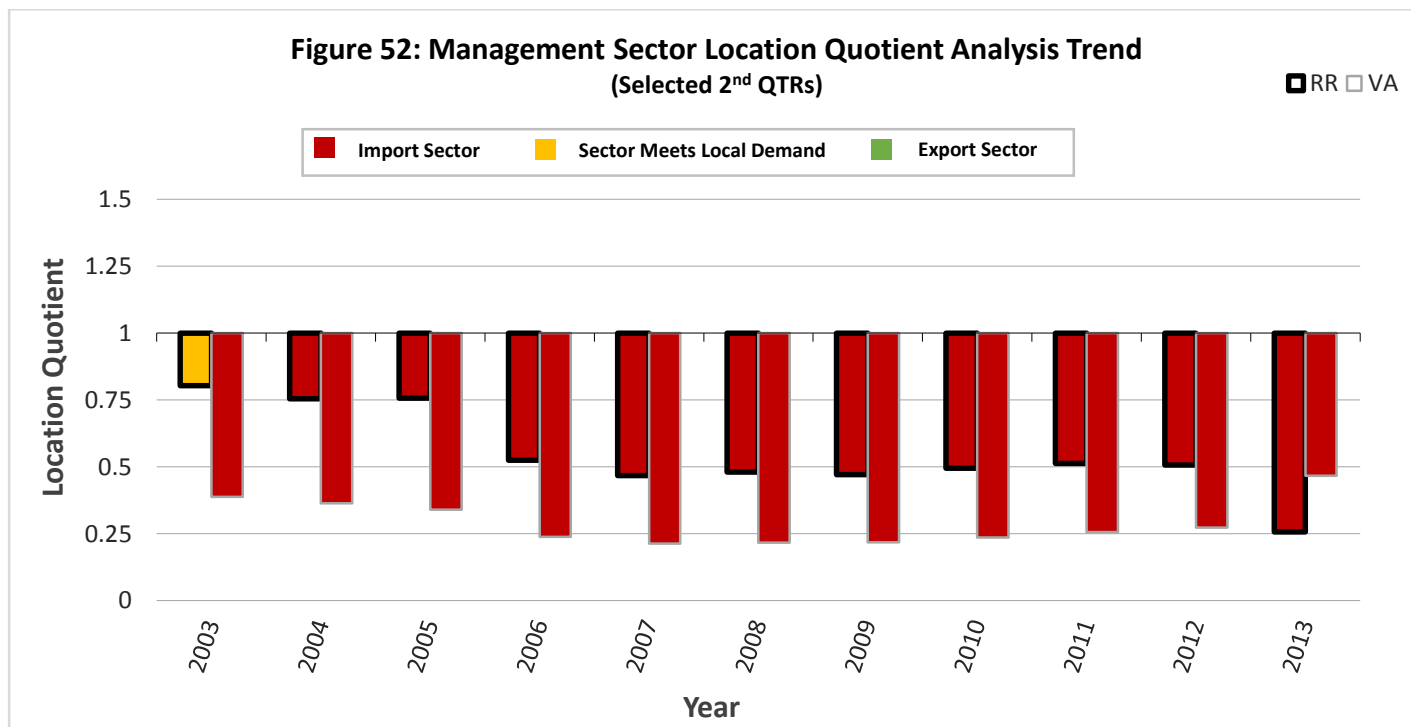
NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
5511	Management of Companies and Enterprises	1,213	76	\$1,846

## Location Quotient Analysis

The sole reportable industry in the Management sector is considered an “import” industry in both the Richmond Region (RR) and the state overall (VA). This industry group is considerably weaker in the Richmond Region than in Virginia overall due to the fact that most of these industries are located outside of Chesterfield County.



Location quotient analysis of the Management of Companies and Enterprises sector finds that this sector has been losing strength in the local economy since 2003, but has always been a weak area when compared to the region and the state. This sector does not appear to be a significant economic driver in Chesterfield, and many of the services this sector provides are found outside of the county.



## Shift-Share Analysis

Employment in the Management sector in Chesterfield County grew more slowly than the overall average of the state economy for all industries. If this sector matched the state overall growth rate for all industries, it would have added 111 jobs from 2003-2013, but instead lost 720 jobs. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 35: State Growth Share; Management Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Management of Companies & Enterprises	1,822	+6.09%	+111	-720
<b>Countywide</b>			<b>+5,596</b>	<b>+9,060</b>

The Management sector is not a competitive industry in Chesterfield. Local conditions contributed to the non-realization of 806 jobs in this sector from 2003-2013. Chesterfield County overall is a highly competitive jurisdiction within the state, with local conditions contributing to the realization of 6,776 jobs above the state average.

**Table 36: Local Competitive Share; Management Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Management of Companies & Enterprises	1,822	-33.42%	+10.82%	-806
<b>Countywide</b>				<b>+6,776</b>

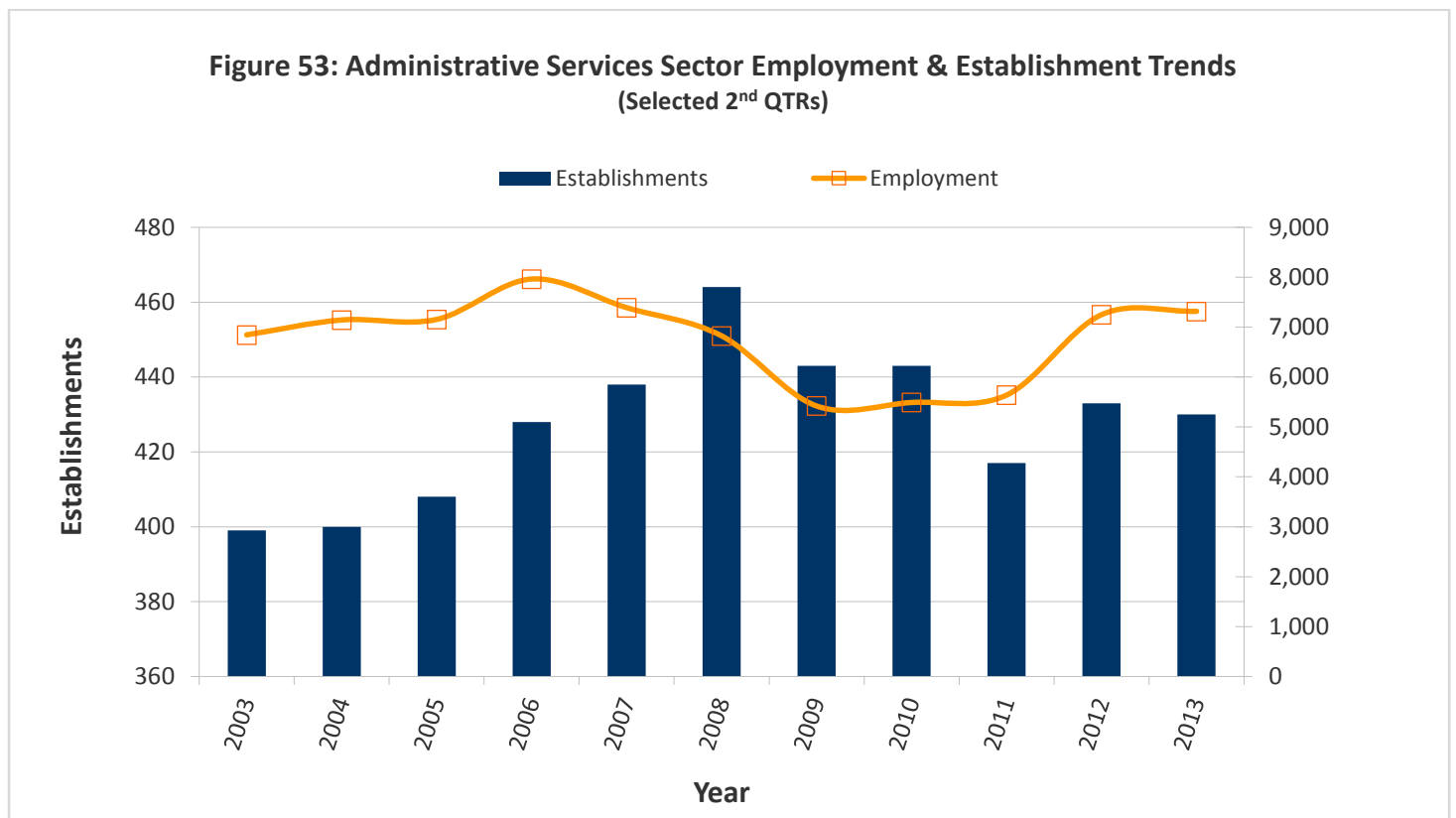
## ADMINISTRATIVE & SUPPORT & WASTE MANAGEMENT & REMEDIATION SERVICES SECTOR

The Administrative and Support and Waste management and Remediation Services sector comprises establishments performing routine support activities for day-to-day operations of other businesses. These essential services are often undertaken in-house by establishments in many sectors of the sectors of the economy.



### Sector Trends

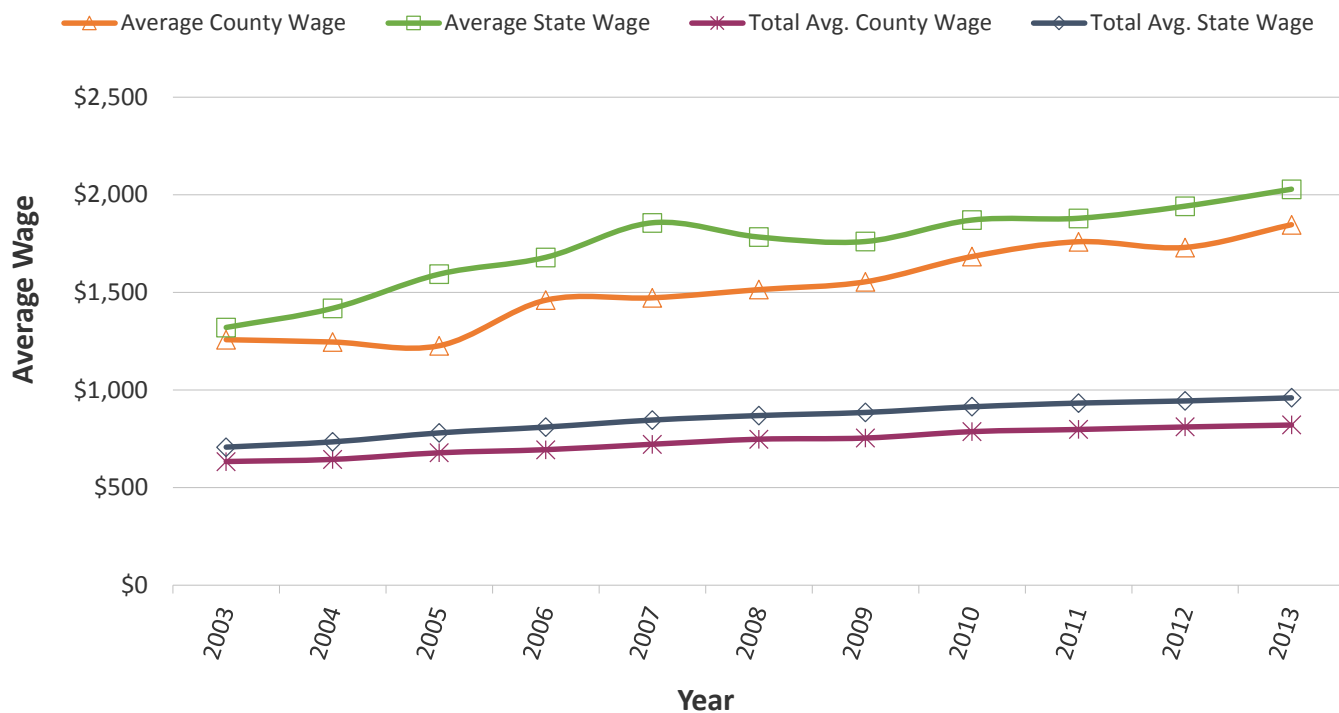
Chesterfield had 430 establishments (5.6 percent of the county total) in this sector in the second quarter of 2013, employing 7,315 persons (7.3 percent of the county total). The number of establishments in this sector has increased by eight percent since 2003, while employment has increased by seven percent, or an average annual increase of 1.5 percent.



The average weekly wage for a worker in the Administrative Services sector in Chesterfield County was \$602 as reported for the second quarter of 2013. This represents an increase of 33 percent over 2003, or an average annual increase of 3.3 percent. The Virginia wage for this sector was \$705 during the second quarter of 2013, which represents an increase of 42 percent over 2003, or an average annual increase of 4.0 percent. Chesterfield's total average weekly wage was \$821, an increase of 30 percent over 2003, and Virginia's average weekly wage was \$960, representing an increase of 36 percent over 2003. Wage trends for the information sector are depicted in greater detail in figure 54 on the following page.



**Figure 54: Administrative Services Sector Comparative Average Weekly Wage Trend  
(Selected 2<sup>nd</sup> QTRs)**



## Job Distribution

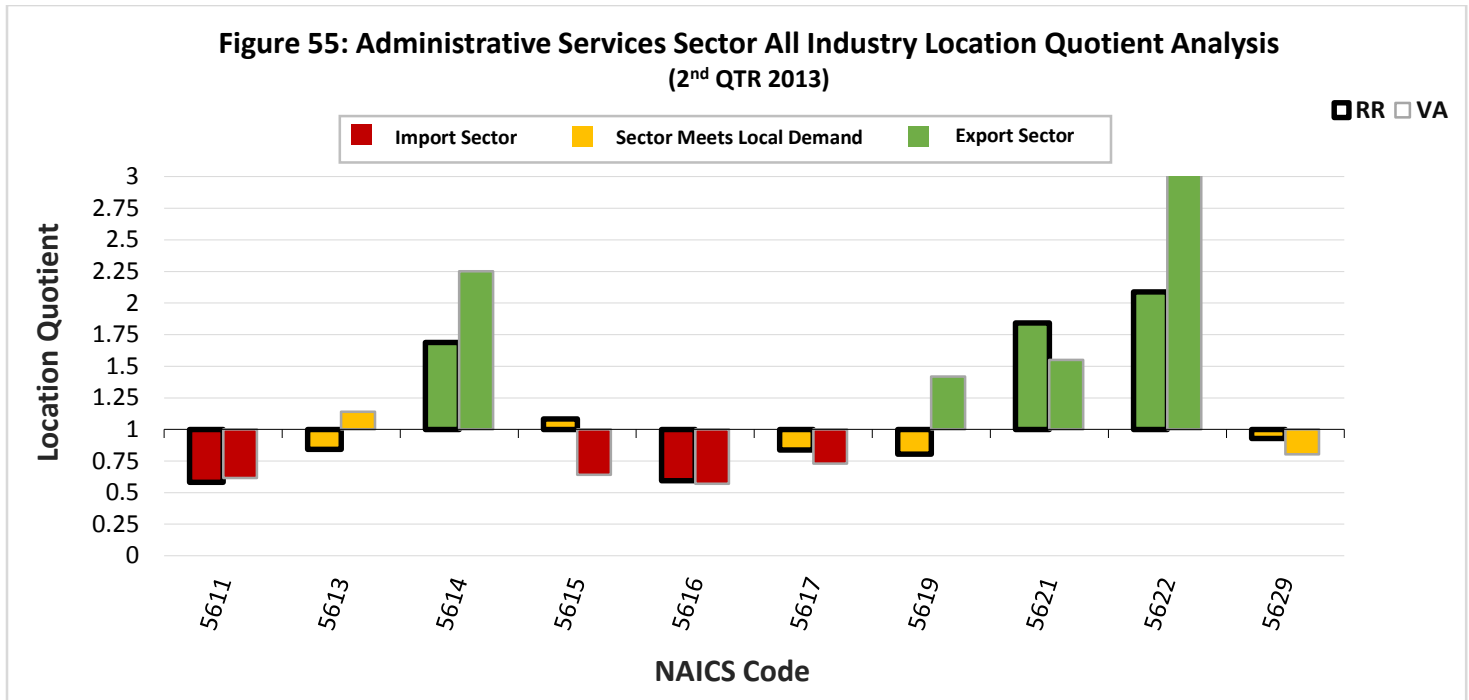
Approximately 33 percent of Administrative Services workers in Chesterfield are employed in the Employment Services industry group. However, the highest-paying industry in this sector was Office Administrative Services, with an average weekly wage of \$2,062.

**Table 37: Administrative Services Sector; Top 5 Industry Employment 2003-2013**

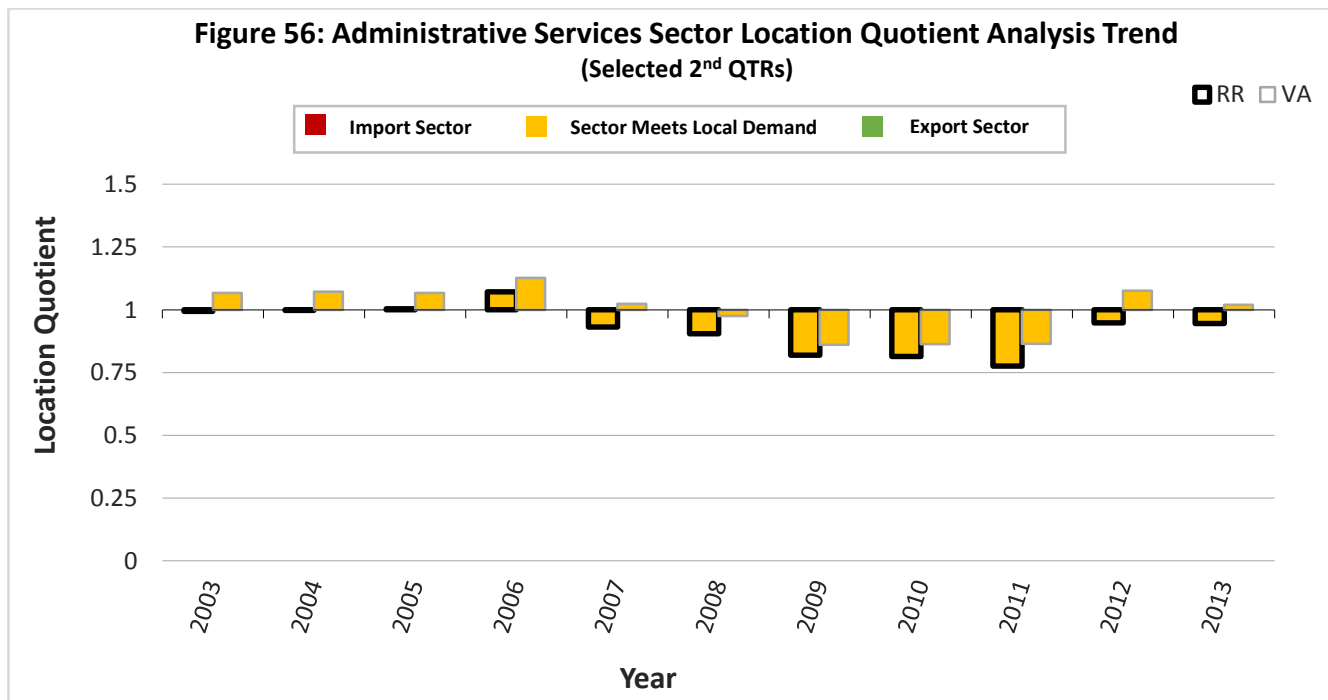
NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
5613	Employment Services	2,445	58	\$471
5617	Services to Buildings and Dwellings	1,658	206	\$430
5614	Business Support Services	1,579	44	\$701
5616	Investigation and Security Services	487	33	\$560
5619	Other Support Services	275	23	\$731

## Location Quotient Analysis

Of the nine reportable administrative sector industry groups in Chesterfield County, two are considered basic, or exporting compared to both the region and the state. Basic industries are drivers of the local economy, typically bringing in money from surrounding jurisdictions for services provided.



Location quotient analysis of the Administrative Services sector finds that this industry had been weakening in both the region and state up until 2011, and then strengthened from 2011-2013. This sector is just sufficient to meet the needs of the local population.



## Shift-Share Analysis

Employment in the Administration sector in Chesterfield County grew much slower than the overall average of the state economy. If this sector matched the state overall growth rate for all industries, it would have added 417 jobs over the ten year period from 2003-2013, but instead gained 54. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 38: State Growth Share; Administrative Services Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Administrative Services	6,844	+6.09%	+417	+54
<b>Countywide</b>			<b>+5,596</b>	<b>+9,060</b>

The Administration sector is not a competitive industry in Chesterfield. Local conditions contributed to the non-realization of 91 jobs in this sector from 2003-2013. Chesterfield County overall is a highly competitive jurisdiction within the state, with local conditions contributing to the realization of 6,776 jobs above the state average.

**Table 39: Local Competitive Share; Administrative Services Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Administrative Services	6,844	+6.88%	+8.22%	-91
<b>Countywide</b>				<b>+6,776</b>

## EDUCATIONAL SERVICES SECTOR

The Educational Services sector comprises establishments that provide instruction and training in a wide variety of subjects. This instruction and training is provided by specialized establishments, such as schools, colleges, universities, and training centers. This report includes only privately owned and operated businesses for profit or not for profit, not publically owned and operated facilities.

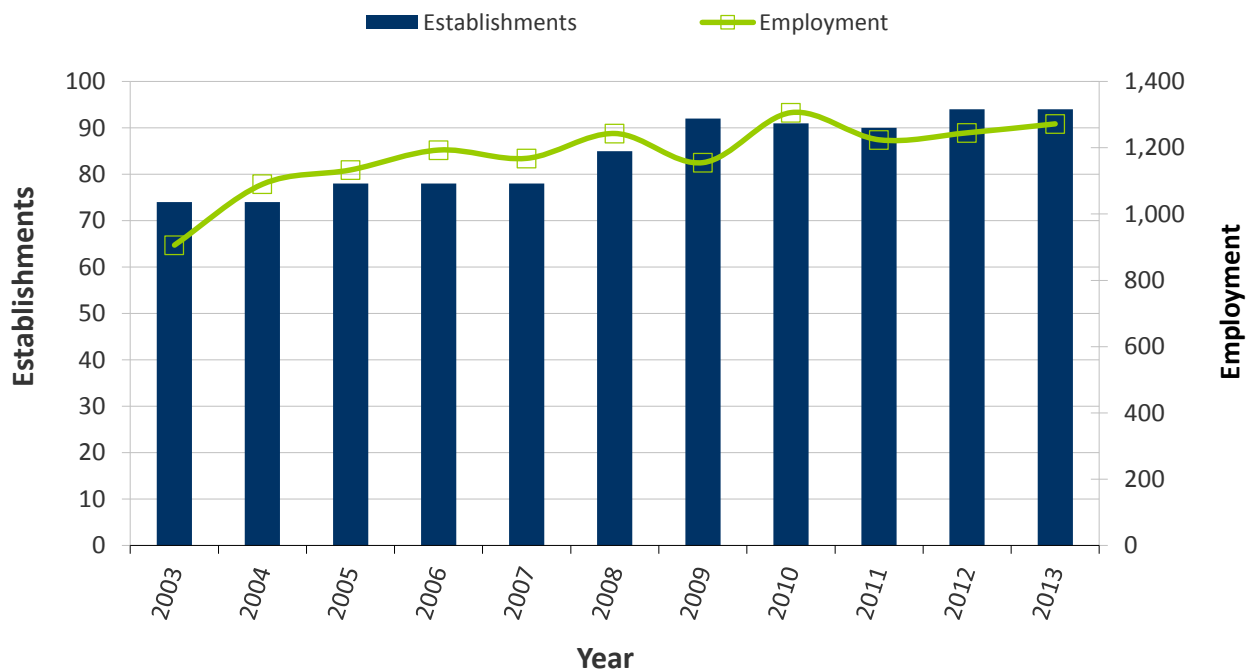


### Sector Trends

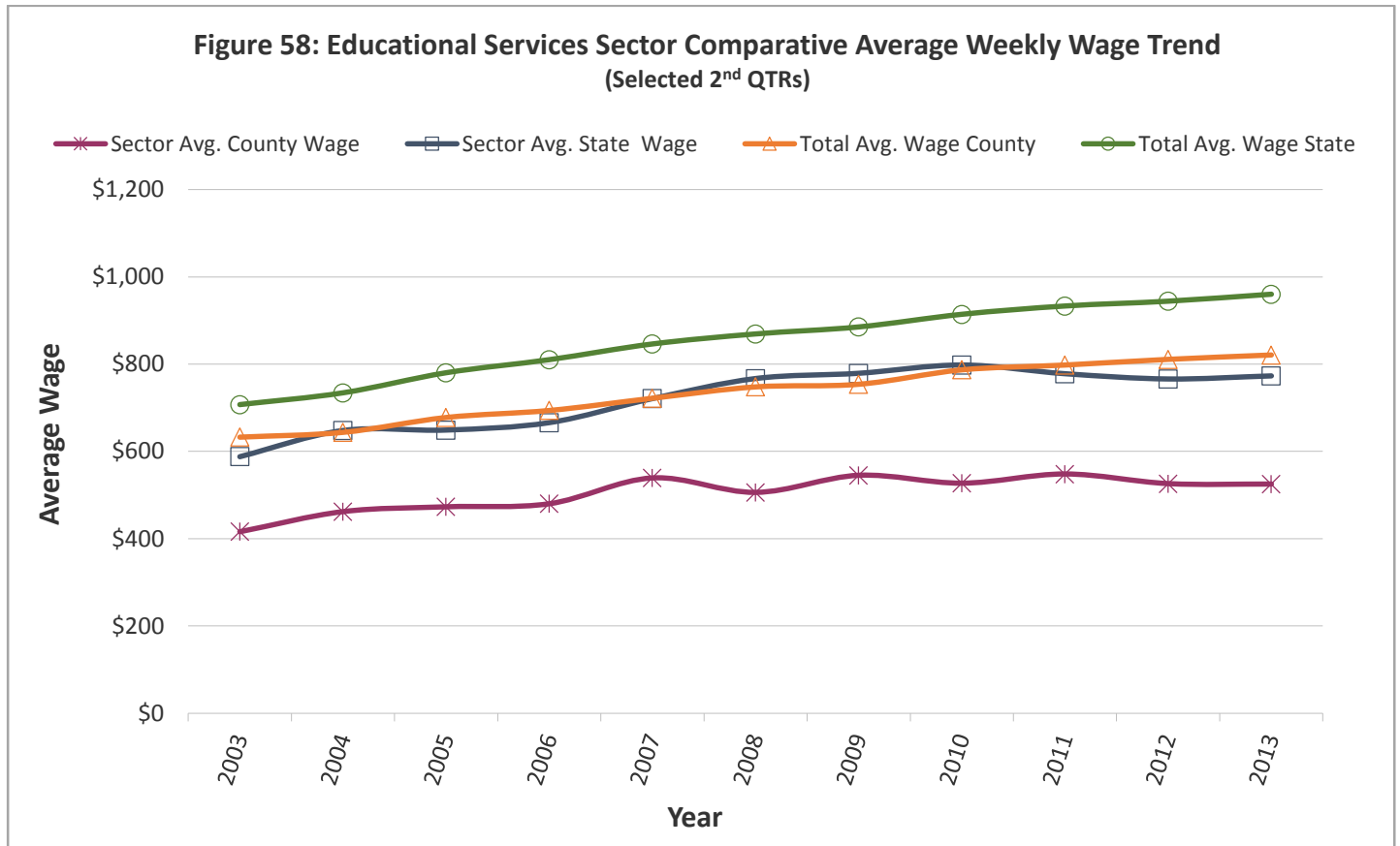
There were 94 establishments (1.2 percent of the county total) in the Education Sector in Chesterfield County during the second quarter of 2013, employing 1,272 persons (1.3 percent of the county total).

The number of establishments in this sector has increased by 27 percent over the ten year period from 2003-2013, or 2.8 percent annually. Employment has increased by 40 percent over the ten year period, which represents an average annual increase of 4.2 percent. Both employment and the number of establishments for this sector have increased steadily over the ten year period and exhibited very little fluctuation.

**Figure 57: Educational Services Sector Employment & Establishment Trends**  
(Selected 2<sup>nd</sup> QTRs)



The average weekly wage of a worker in the Education Sector in Chesterfield County was \$525 during the second quarter of 2013. This represents a net increase of 26 percent over the ten year period from 2003-2013, or an average annual increase of 2.8 percent. The Virginia wage for this sector during the second quarter of 2013 was \$773, which represents a net increase of 31 percent over the ten year period, or an average annual increase of 3.2 percent. Chesterfield’s total average weekly wage was \$821, an increase of 30 percent over 2003, and Virginia’s average weekly wage was \$960, representing an increase of 36 percent over 2003. Wage trends for the information sector are depicted in greater detail in figure 58 below.



## Job Distribution

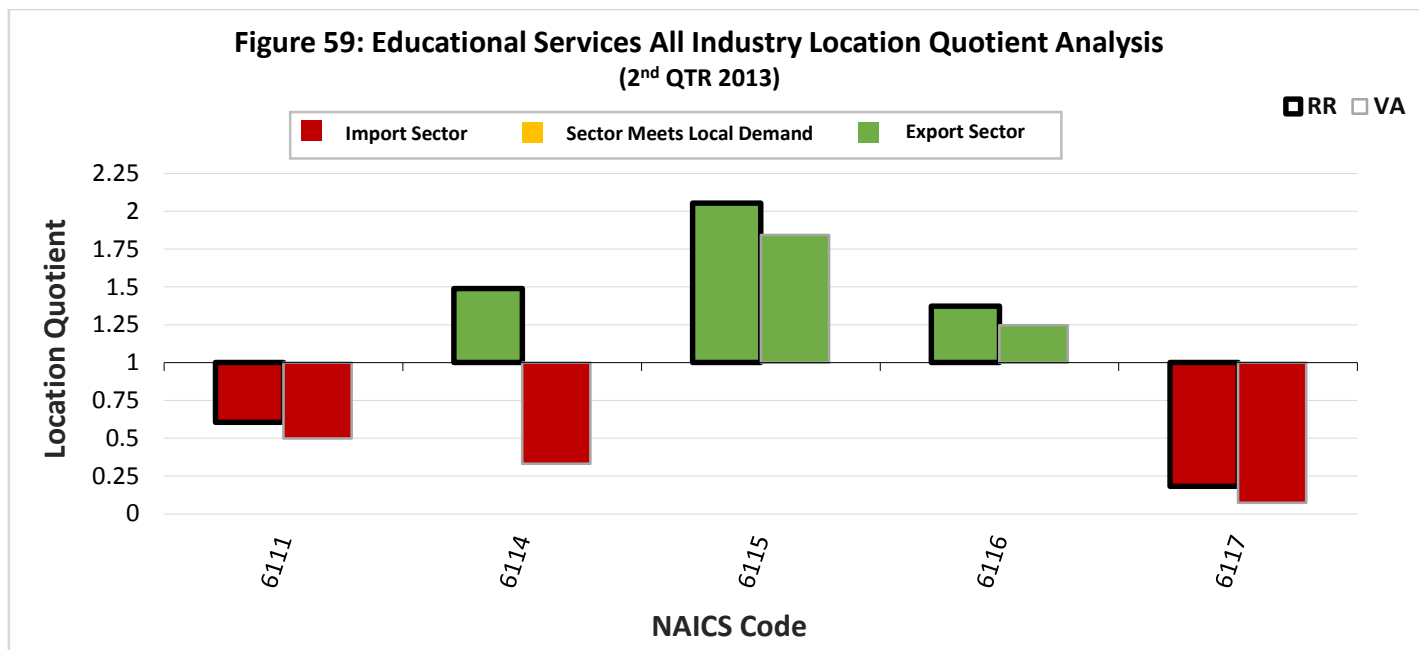
Approximately 35 percent of workers in the Education Sector in Chesterfield County are employed in the Other Schools and Instruction industry group. The industry group with the highest average weekly wage for this sector, however, is the Business Schools and Computer Management industry, at \$1,312. Employment in this industry group only accounts for 3.2 percent of total sector employment.

**Table 40: Educational Services Sector; Top 4 Industry Employment 2<sup>nd</sup> QTR 2013**

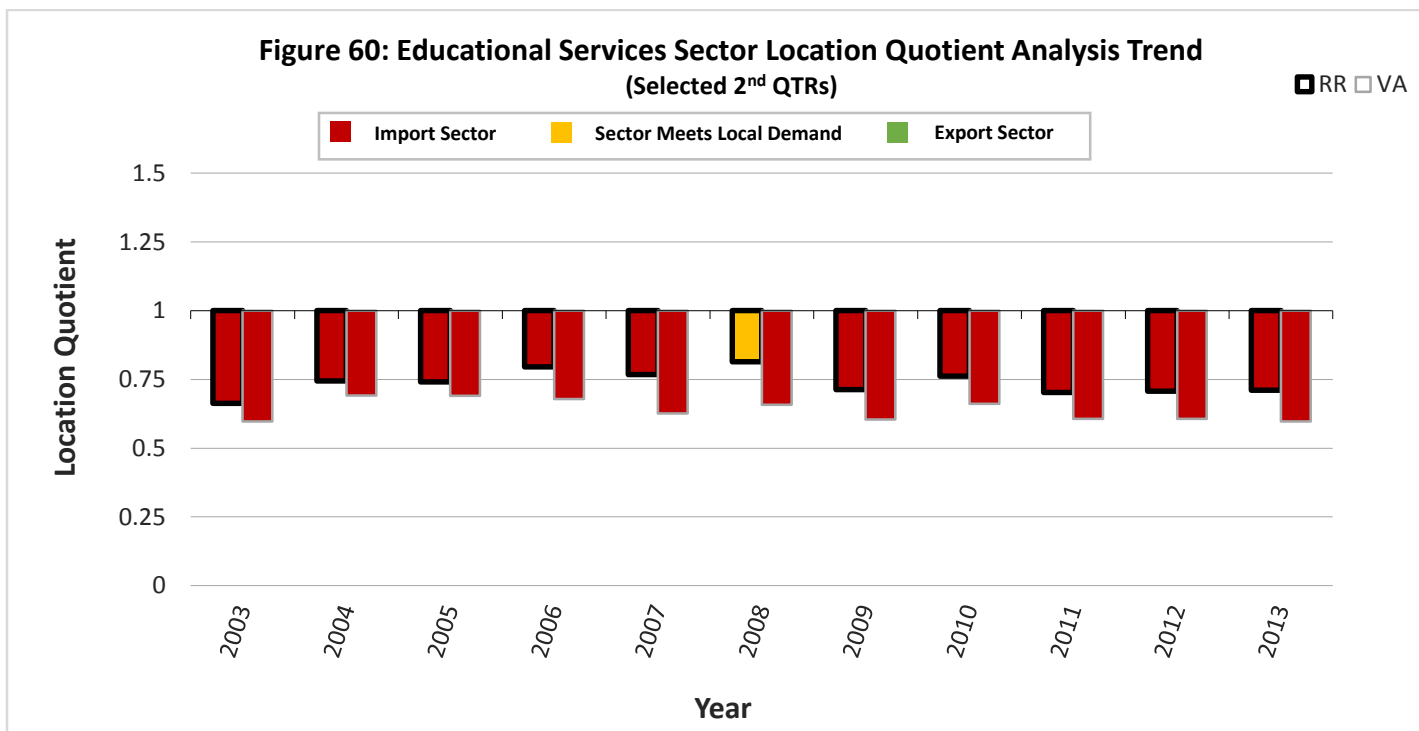
NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
6116	Other Schools and Instruction	448	56	\$233
6111	Elementary and Secondary Schools	318	7	\$604
6115	Technical and Trade Schools	149	5	\$563
6114	Business Schools and Computer Management	41	12	\$1,312

## Location Quotient Analysis

Of the five reportable Educational Sector industry groups in Chesterfield, two are considered basic, or exporting in both the region and the state. Basic industries are drivers of the local economy, typically bringing in money from surrounding jurisdictions for services provided.



Location quotient analysis of the Educational Services sector finds that this industry has been weakening since 2004. This sector is considered insufficient to meet the needs of the local population.



## Shift-Share Analysis

Employment in the Education sector in Chesterfield County grew faster than the overall average of the state economy. If this sector had matched the state overall growth rate for all industries, it would have added 55 jobs over the ten year period from 2003-2013, but instead added 311 jobs. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 41: State Growth Share; Educational Services Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Educational Services	906	+6.09%	+55	+311
<i>Countywide</i>			<b>+5,596</b>	<b>+9,060</b>

The Education sector is a competitive industry in Chesterfield. Local conditions contributed to the gain of 41 jobs in this sector from 2003-2012. Chesterfield overall is a highly competitive locality, with local conditions contributing 6,776 jobs above that of the state average.

**Table 42: Local Competitive Share; Educational Services Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Educational Services	906	+40.40%	+35.90%	+41
<i>Countywide</i>				<b>+6776</b>



## HEALTH CARE AND SOCIAL ASSISTANCE SECTOR

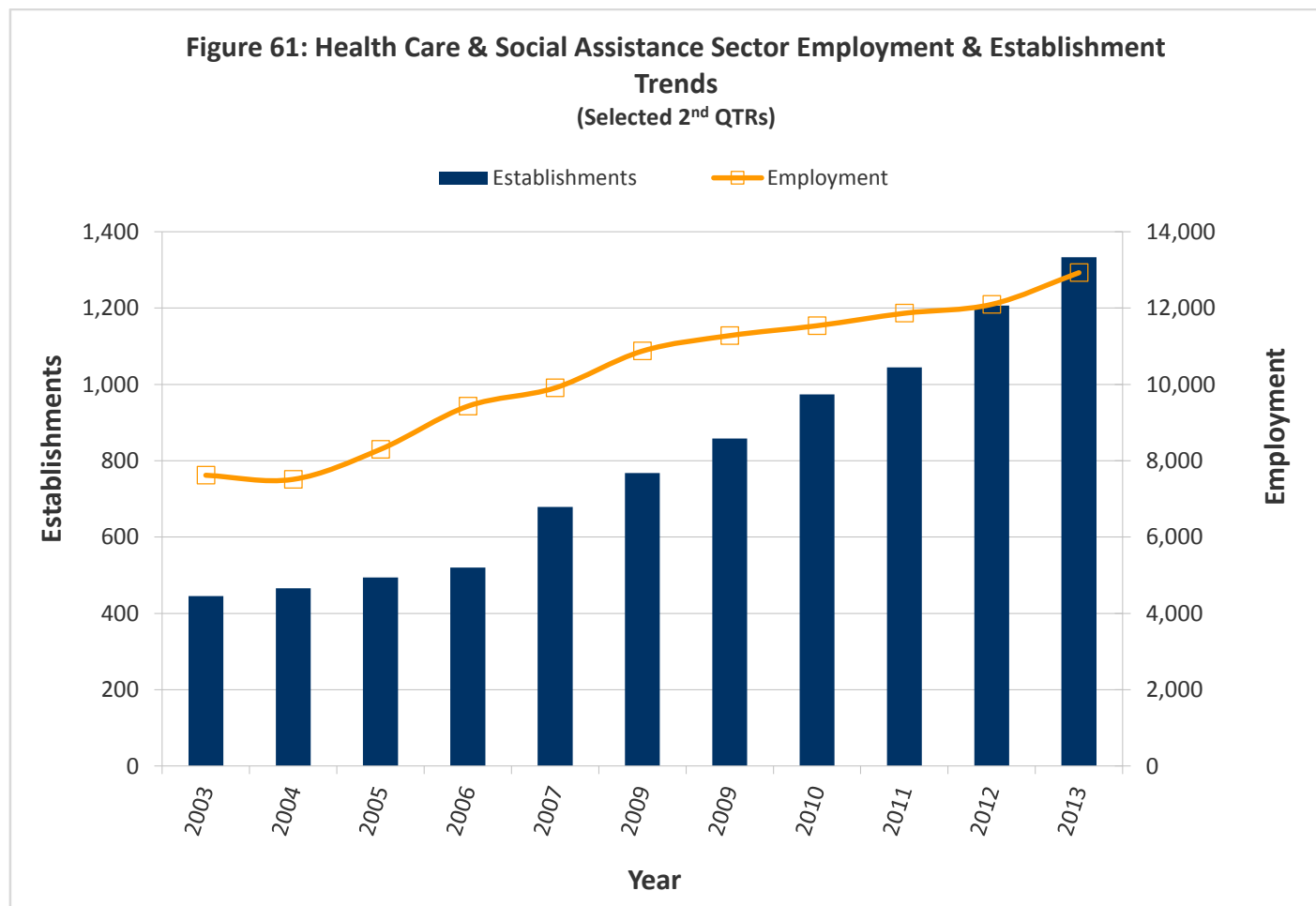
The Health Care and Social Assistance sector comprises establishments providing health care and social assistance for individuals. The services provided by businesses in this sector are delivered by trained professionals, with many of the industries in this sector defined by the educational degree held by the practitioners of the industry.



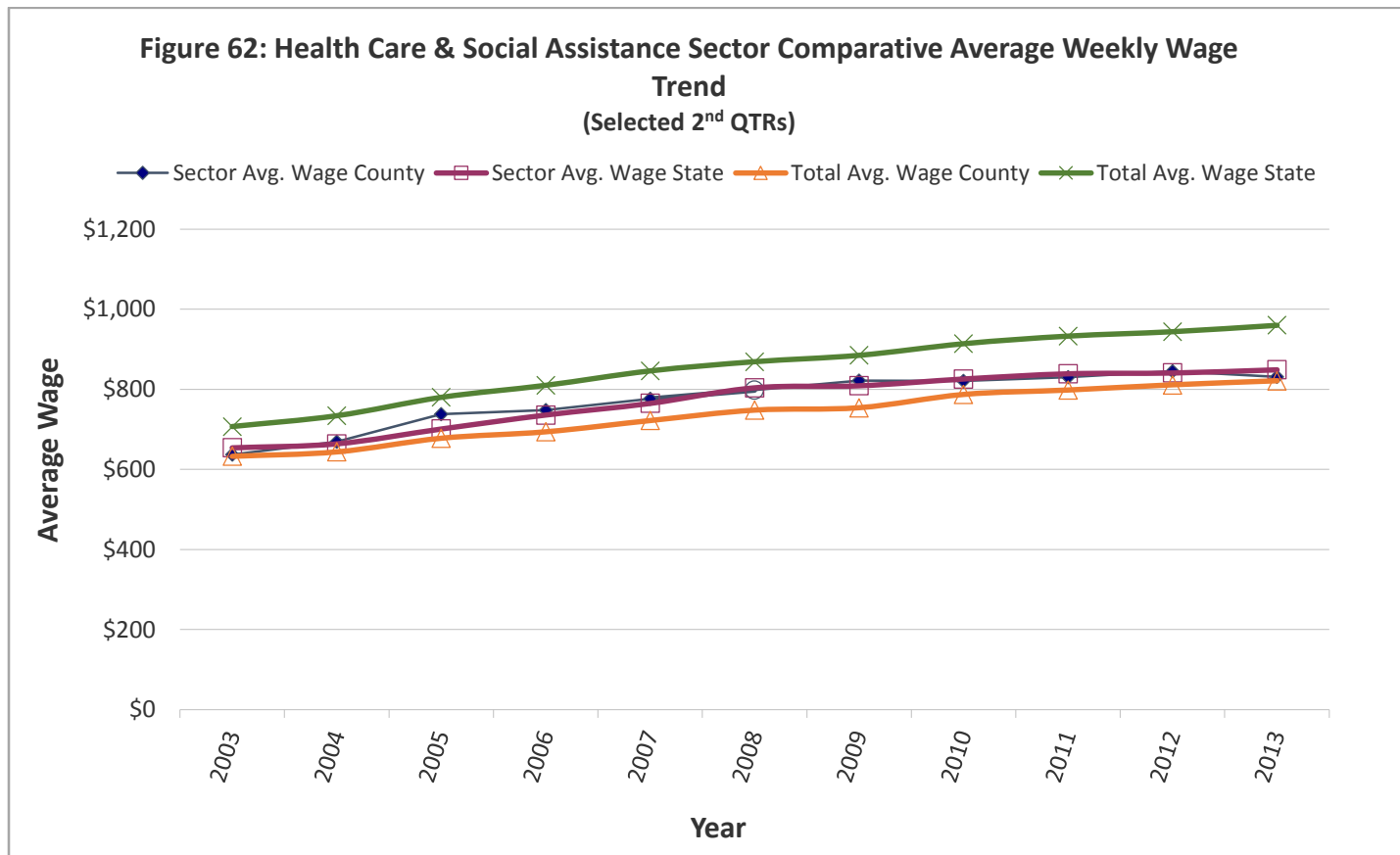
### Sector Trends

There were 1,333 establishments (17.5 percent of the county total) in the Health Care and Social Assistance sector in Chesterfield County for the second quarter of 2013, employing 12,931 persons (12.8 percent of the county total).

The number of establishments in this sector increased by 200 percent over 2003, which represents an average annual increase of 13.1 percent. Employment increased dramatically as well over the ten year period, at 70 percent over 2003 or an average annual increase of 6.1 percent.



The average weekly wage of a worker in the Health Care and Social Assistance sector in Chesterfield County was \$831 as reported for the second quarter of 2013. This represents an increase of 30 percent over 2003, or an average annual increase of 3.0 percent. The Virginia wage for this sector during the second quarter of 2013 was \$849, which also represents a 30 percent increase over 2003, or an average annual increase of just under 3.0 percent. Chesterfield’s total average weekly wage was \$821, an increase of 30 percent over 2003, and Virginia’s average weekly wage was \$960, representing an increase of 36 percent over 2003. Wage trends for the information sector are depicted in greater detail in figure 62 below.



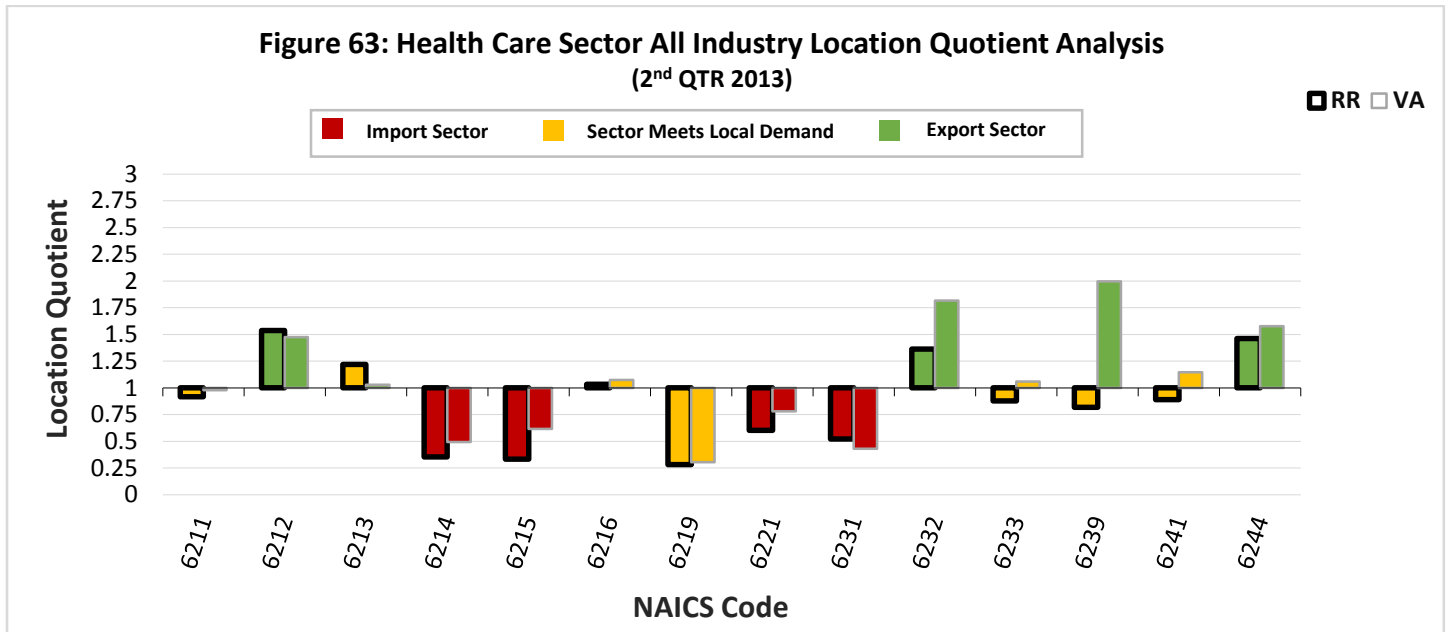
## Job Distribution

**Table 43: Health Care Sector; Top 6 Industry Employment 2003-2013**

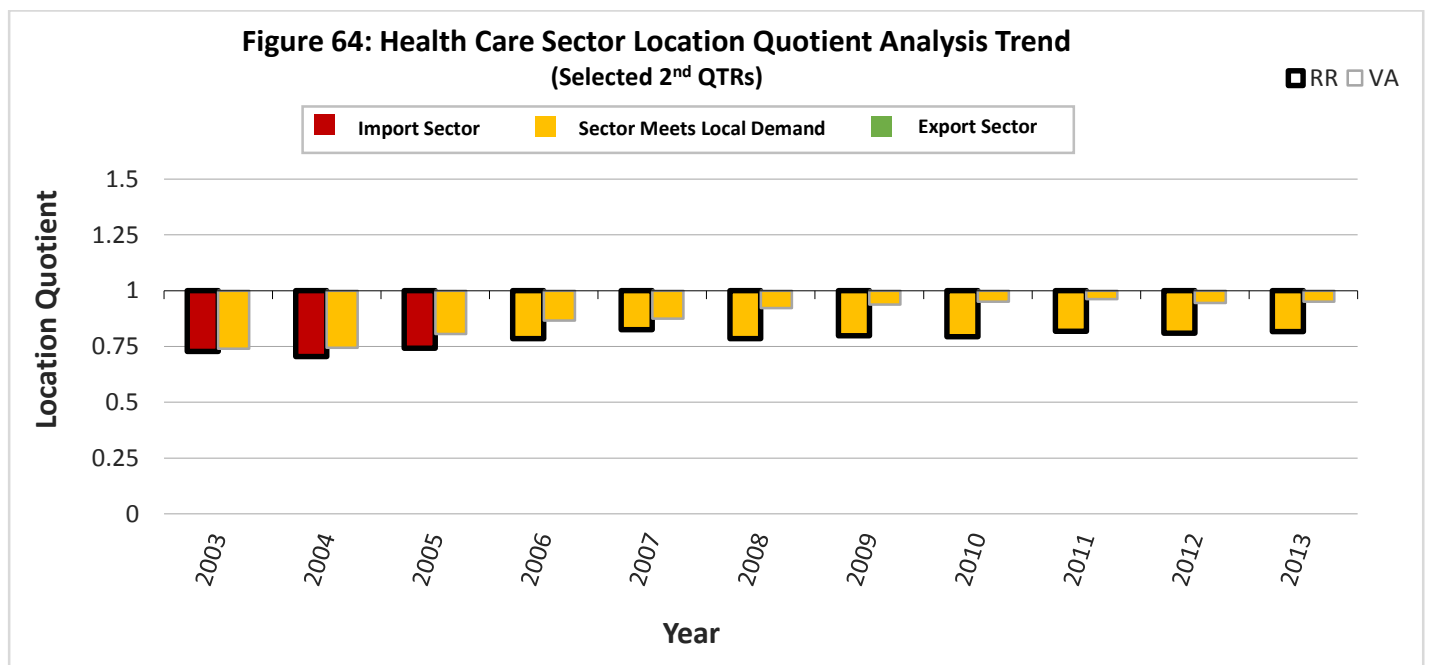
NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
<b>6221</b>	General Medical & Surgical Hospitals	2,580	7	\$1,007
<b>6211</b>	Offices of Physicians	2,152	164	\$1,610
<b>6241</b>	Individual & Family Services	1,448	700	\$358
<b>6244</b>	Child Day Care Services	1,165	69	\$365
<b>6212</b>	Offices of Dentists	1,156	129	\$1,051
<b>6233</b>	Home Health Care Services	954	17	\$416

## Location Quotient Analysis

Of the 14 reportable Health Care sector industry groups in Chesterfield County, three are considered basic, or exporting to at both the state and regional levels. The Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse (NAICS code 6232) has a strong presence for the county, particularly at the state level while both Child Day Care Services (NAICS code 6244) and the Offices of Dentists (NAICS code 6212) industry groups had a strong presence at both the state and regional levels. While not considered a basic industry at the regional level, the Other Residential Care Facilities industry group (NAICS code 6239) had a strong presence for the county at the state level.



Location quotient analysis of the Health Care sector reveals that the sector, while not a driver of the local economy, has been gaining in strength since 2003, and particularly since 2004, when a new hospital opened in the county. This sector, once a non-basic or import industry, is now strong enough to meet the needs of the local population.



## Shift-Share Analysis

Employment in the Health Care Sector grew much faster in Chesterfield County than the state average. If local growth had matched growth at the state level, this sector would have anticipated the addition of 442 jobs over the ten year period from 2003-2013, but instead added 5,229 jobs. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 44: State Growth Share; Health Care Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Health Care	7,260	+6.09%	+442	+5,229
<b>Countywide</b>			<b>+5,596</b>	<b>+9,060</b>

The Health Care sector is a highly competitive sector for Chesterfield County, with local conditions contributing to the realization of 3,184 jobs above the state average. Chesterfield overall is a highly competitive jurisdiction within the state, with local conditions resulting in the realization of 6,776 jobs above the state average.

**Table 45: Local Competitive Share; Health Care 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Health Care	7,260	+78.11%	+34.26%	+3,184
<b>Countywide</b>				<b>+6,776</b>

## ARTS, ENTERTAINMENT, AND RECREATION SECTOR

The Arts, Entertainment, and Recreation sector includes a wide range of establishments that operate facilities or provide services to meet varied cultural, entertainment, and recreational interests of their patrons. This sector includes businesses involved in public events or exhibits; historical, cultural, and educational events; and operators of facilities involved in the pursuit of hobby or leisure-time interests.

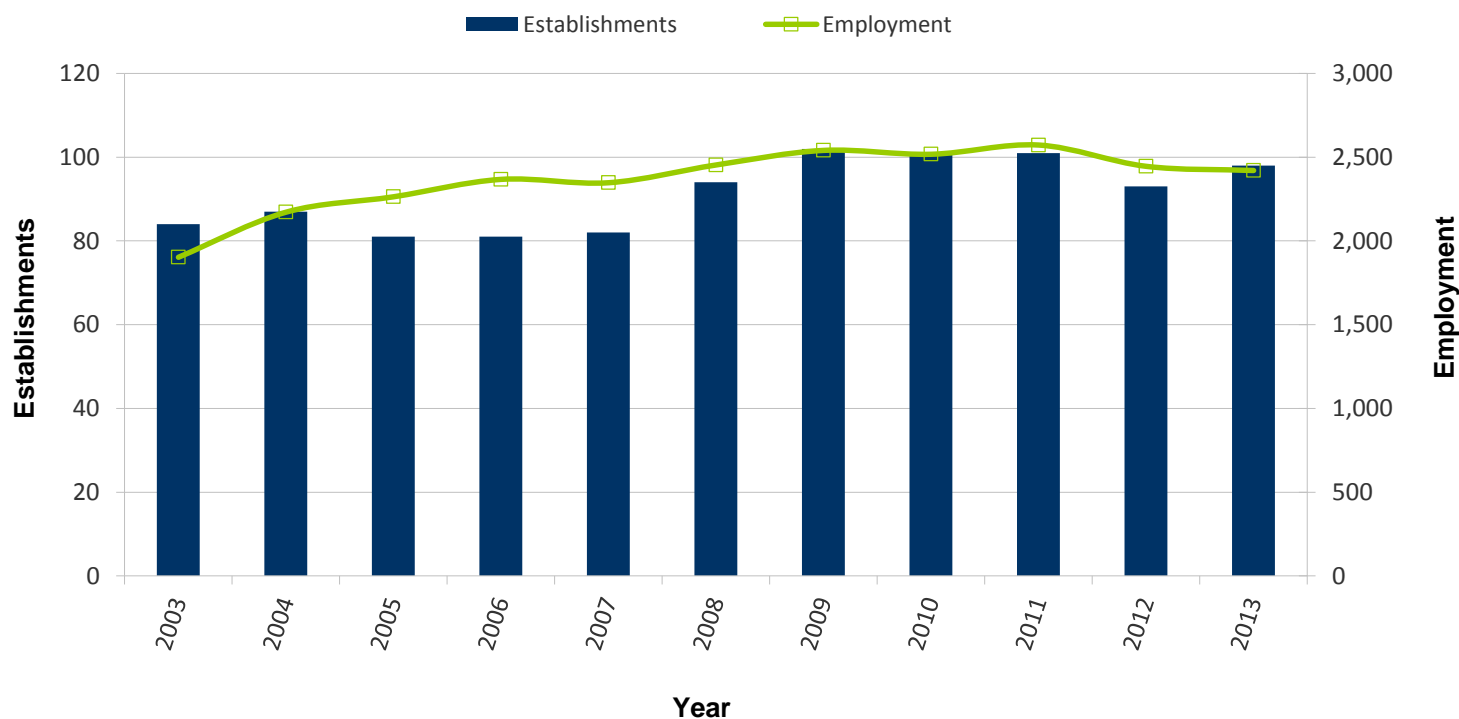


### Sector Trends

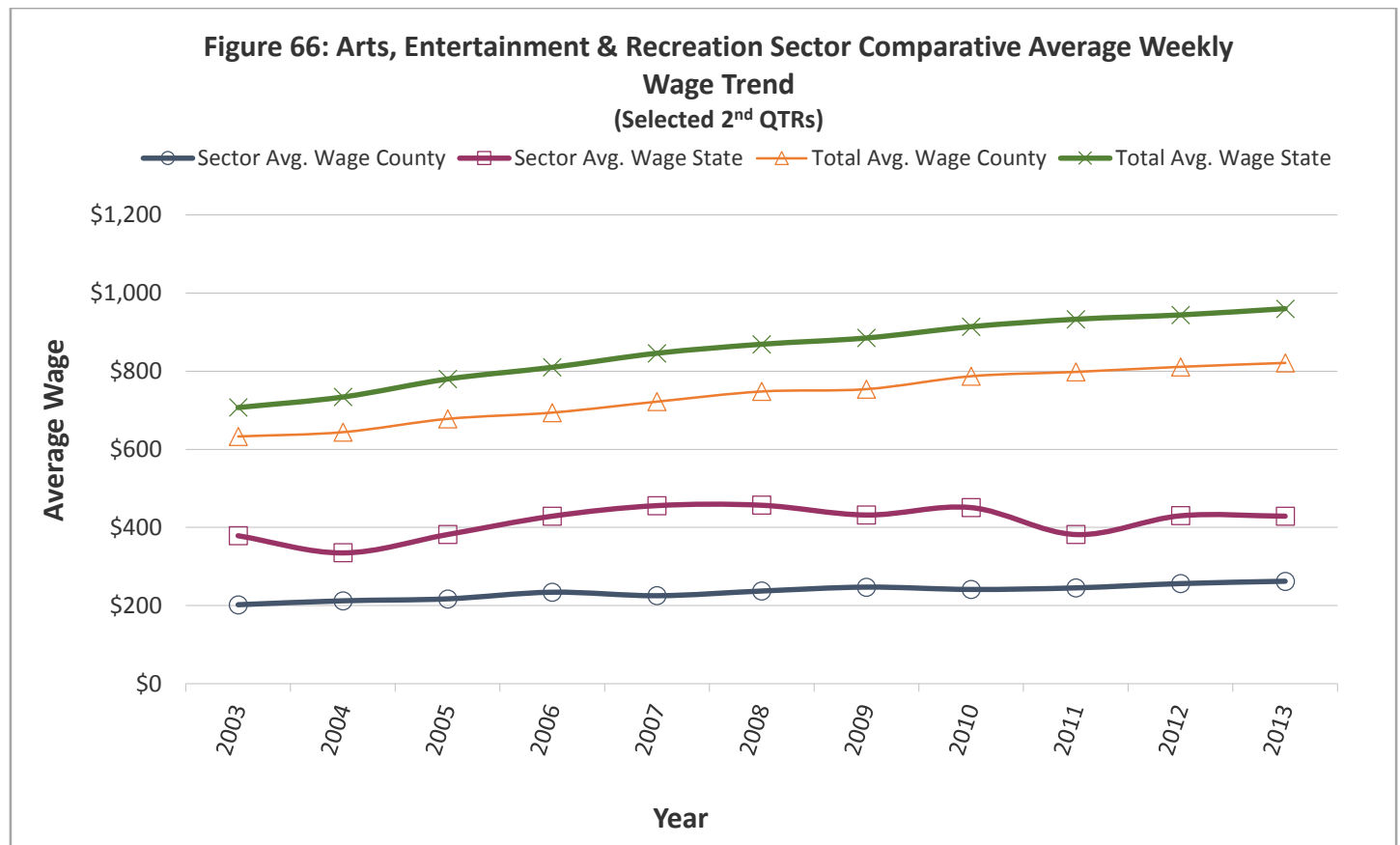
Chesterfield County had 98 establishments (1.3 percent of the county total) in the Arts, Entertainment, and Recreation sector as reported for the second quarter of 2013, employing 2,421 persons (2.4 percent of the county total). This represents an overall increase of 17 percent for establishments and 27 percent for employment over the ten year period from 2003-2013, or an annual increase of 1.9 percent and 2.8 percent, respectively.

Both the number of establishments and employment levels experienced an overall increasing trend throughout the ten year period, with the number of establishments experiencing a slight decline during the period from 2004-2007, before increasing once again. These trends are depicted in further detail in figure 65 below.

**Figure 65: Arts, Entertainment, & Recreation Sector Employment  
& Establishment Trends  
(Selected 2<sup>nd</sup> QTRs)**



The average weekly wage of a worker in the Arts, Entertainment, and Recreation sector in Chesterfield County was \$262 as reported for the second quarter of 2013. This represents an increase of 30 percent over 2003, or an average annual increase of 3.0 percent. The Virginia wage for this sector during the second quarter of 2013 was \$429, which represents an increase of 13 percent over 2003, or an average annual increase of 1.9 percent. Chesterfield’s total average weekly wage was \$821, an increase of 30 percent over 2003, and Virginia’s average weekly wage was \$960, representing an increase of 36 percent over 2003. Wage trends for the information sector are depicted in greater detail in figure 66 below.



## Job Distribution

Over 73 percent of Entertainment sector workers in Chesterfield County are employed in the Other Amusement and Recreation Industries industry group as reported for the second quarter of 2013, while the Independent Artists, Writers, and Performers industry group reported the highest average weekly wage, at \$674. This industry group contributed approximately 0.5 percent of total sector employment.

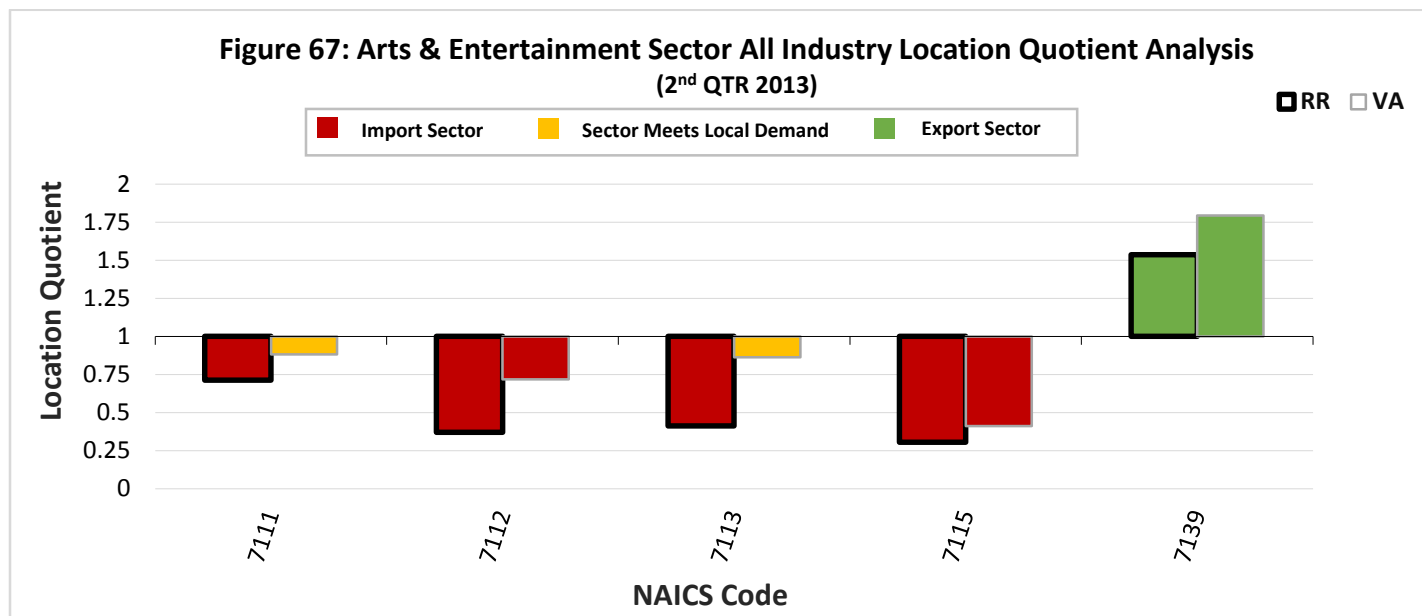
**Table 46: Entertainment Sector; Top 4 Industry Employment 2<sup>nd</sup> QTR 2013**

NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
7139	Other Amusement and Recreation Industries	1,775	74	\$255
7111	Performing Arts Companies	63	5	\$256
7113	Promoters of Performing Arts, Sports, and Similar Events	63	4	\$600
7112	Spectator	59	3	\$73

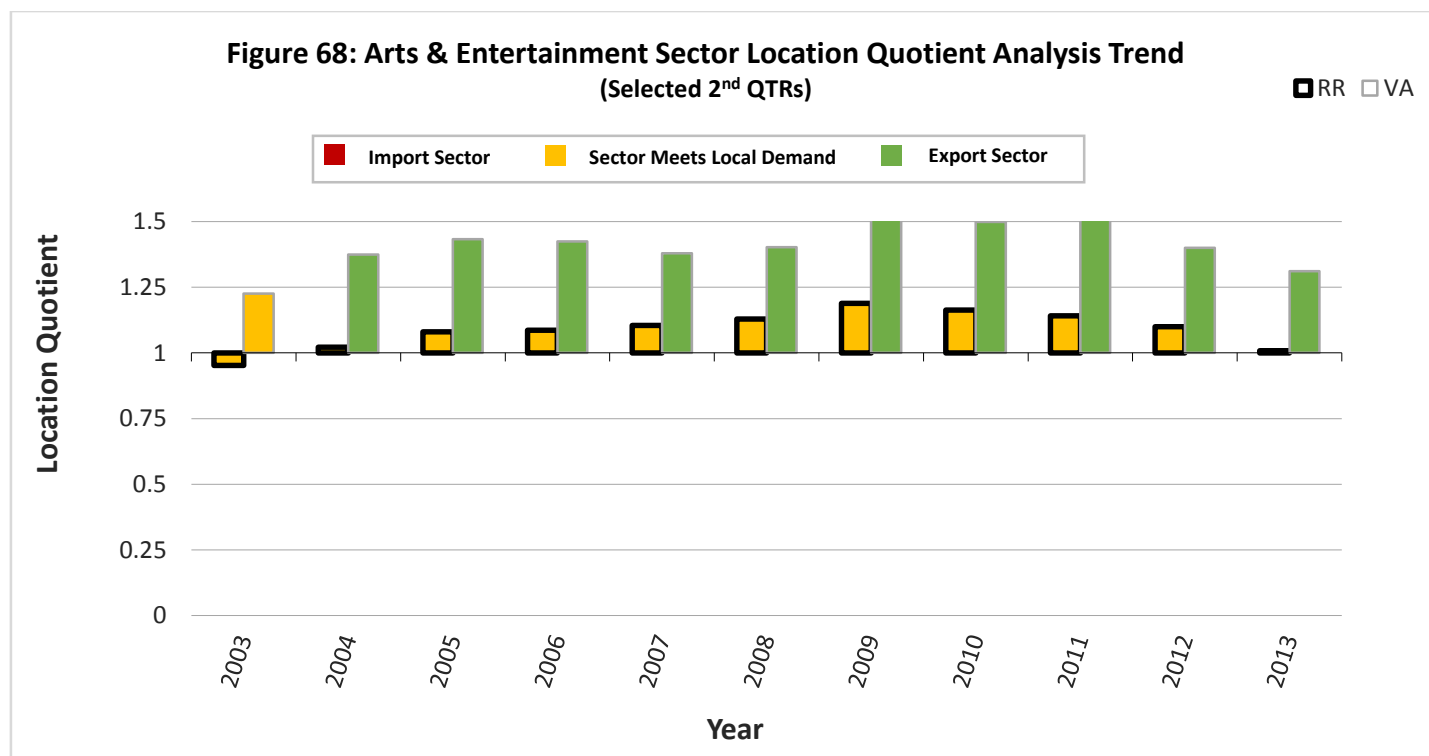


## Location Quotient Analysis

Of the five reportable Entertainment sector industry groups in Chesterfield County, only one is considered basic, or exporting to both the region and the state. The Other Amusement and Recreation Industries industry group (NAICS code 7139) is representative for the county at both the regional and state levels, with a higher degree of representation at the state level.



Location quotient analysis of the Entertainment sector reveals that this sector has been increasing since 2003. The strength of this sector is such that it is considered a basic industry sector when compared to the state, but weaker when compared to the region, yet regional representation is still sufficient to meet local demand.



## Shift-Share Analysis

Employment in the Arts & Entertainment sector in Chesterfield County grew faster than the overall average of the state economy. If this sector had matched the state overall growth rate for all industries, it would have added 116 jobs during the ten year period from 2003-2013, but instead added 402 jobs. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 47: State Growth Share; Entertainment Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Arts, Entertainment, and Recreation	1,903	+6.09%	+116	+402
<b>Countywide</b>			<b>+5,596</b>	<b>+9,060</b>

The Entertainment sector is a competitive industry in Chesterfield. Local conditions contributed to a gain of 232 jobs over the ten year period from 2003-2013. Chesterfield overall is a highly competitive jurisdiction within the state, with local conditions contributing to 6,776 jobs above that of the state average.

**Table 48: Local Competitive Share; Entertainment Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Arts, Entertainment, and Recreation	1,903	+27.22%	+15.05%	+232
<b>Countywide</b>				<b>+6,776</b>

## ACCOMMODATION AND FOOD SERVICES SECTOR

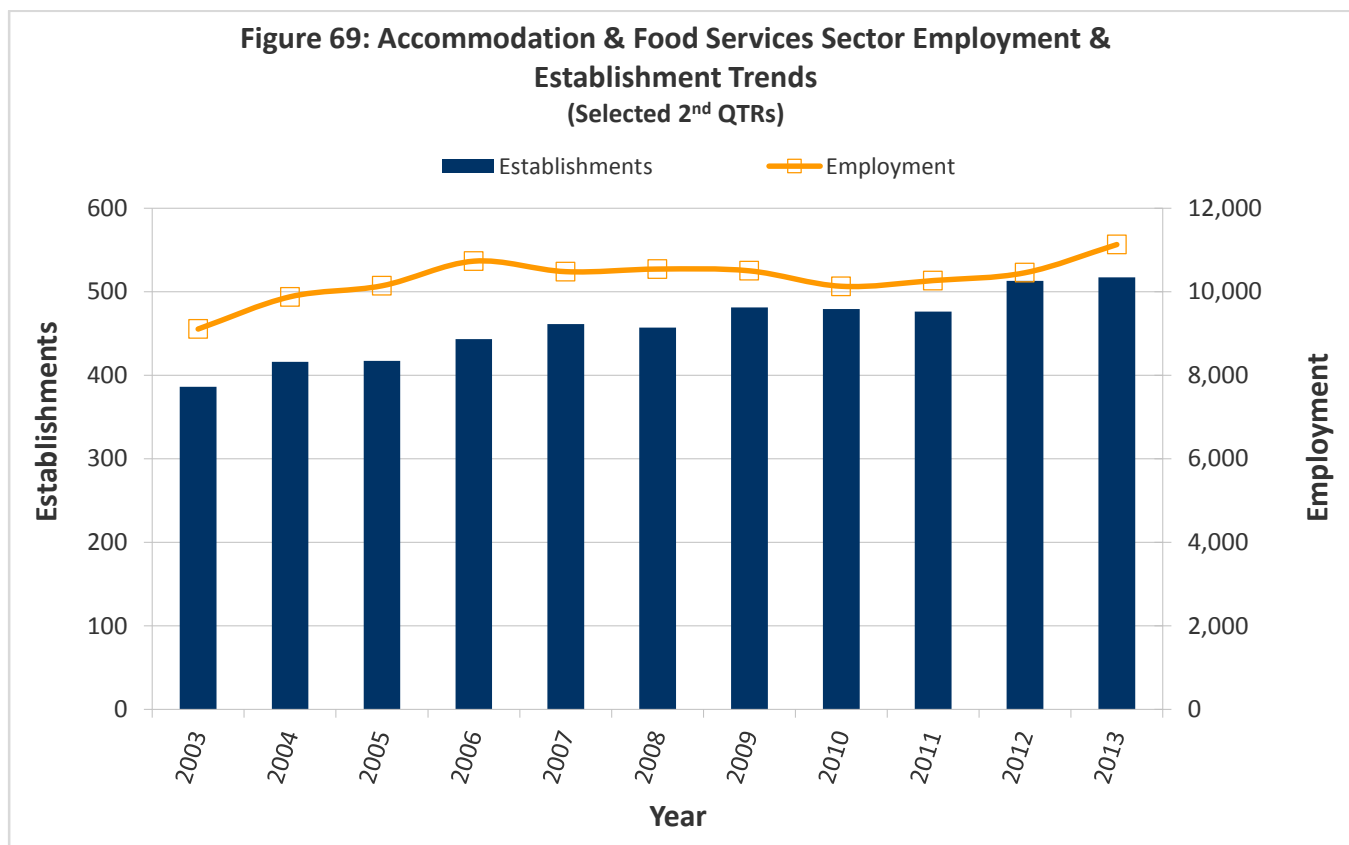
The Accommodation and Food Services sector comprises establishments providing customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption. The sector includes both accommodation and food services establishments because the two activities are often combined at the same establishment.



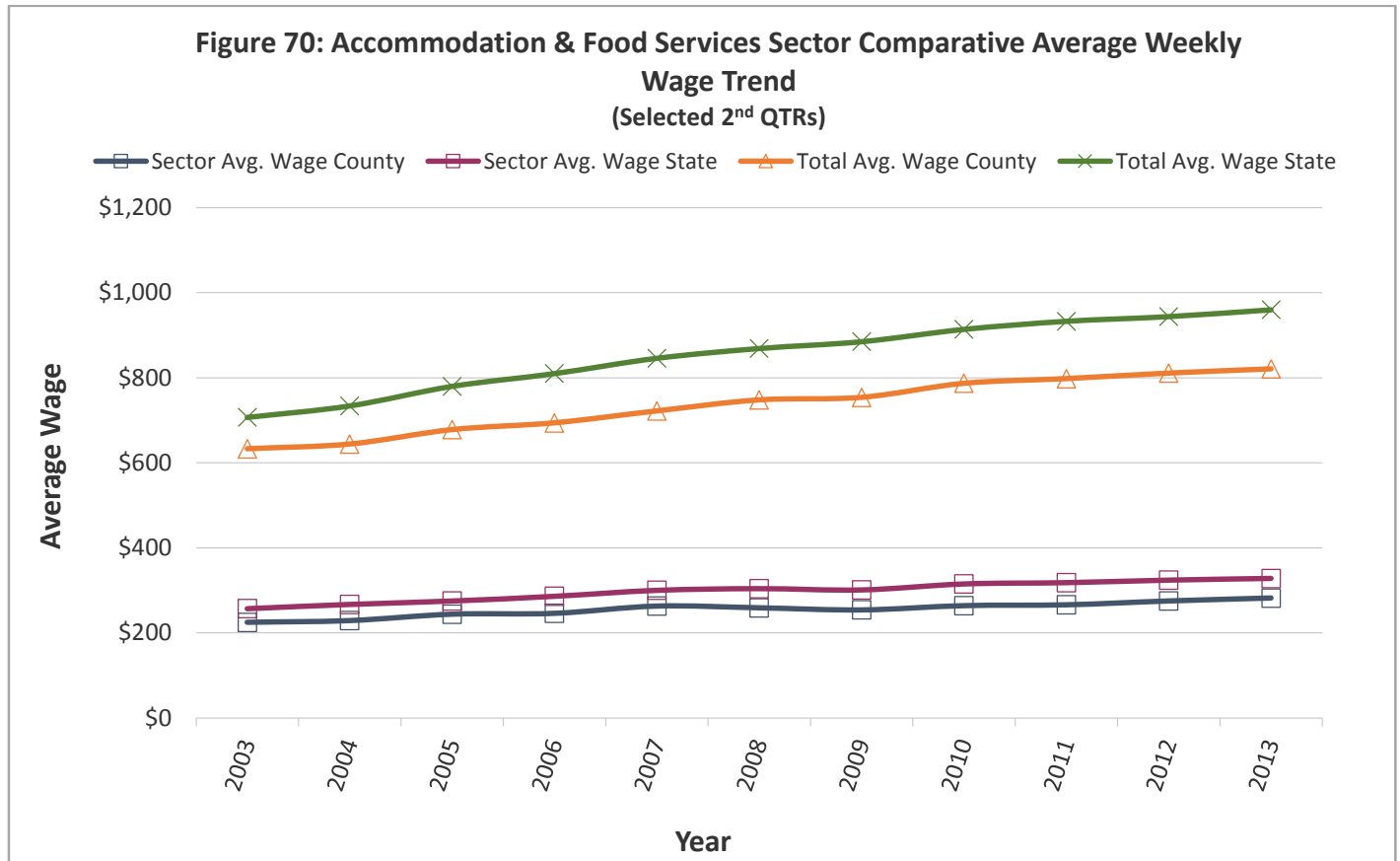
### Sector Trends

Chesterfield County had 517 establishments (6.8 percent of the county total) in the Accommodation and Food Services Sector as reported for the second quarter of 2013, employing 11,128 persons (11.0 percent of the county total). This represents an increase of 34 percent over 2003 for number of establishments, and a 22 percent increase in employment, or an average annual increase of 3.4 percent and 2.3 percent, respectively.

Both employment and number of establishments have exhibited stable upward trends with very little variation throughout the ten year period from 2003-2013. These trends are depicted in greater detail in figure 69 below.



The average weekly wage of a worker in the Accommodation and Food Services sector in Chesterfield County was \$282 as reported for the second quarter of 2013, which represents an increase of 25 percent over 2003 or an average annual increase of 2.6 percent. The average Virginia wage for this sector as reported for the second quarter of 2013 was \$328, which represents an increase of 28 percent over 2003, or an average annual increase of 2.8 percent. Chesterfield’s total average weekly wage was \$821, an increase of 30 percent over 2003, and Virginia’s average weekly wage was \$960, representing an increase of 36 percent over 2003. Wage trends for the information sector are depicted in greater detail in figure 70 below.



## Job Distribution

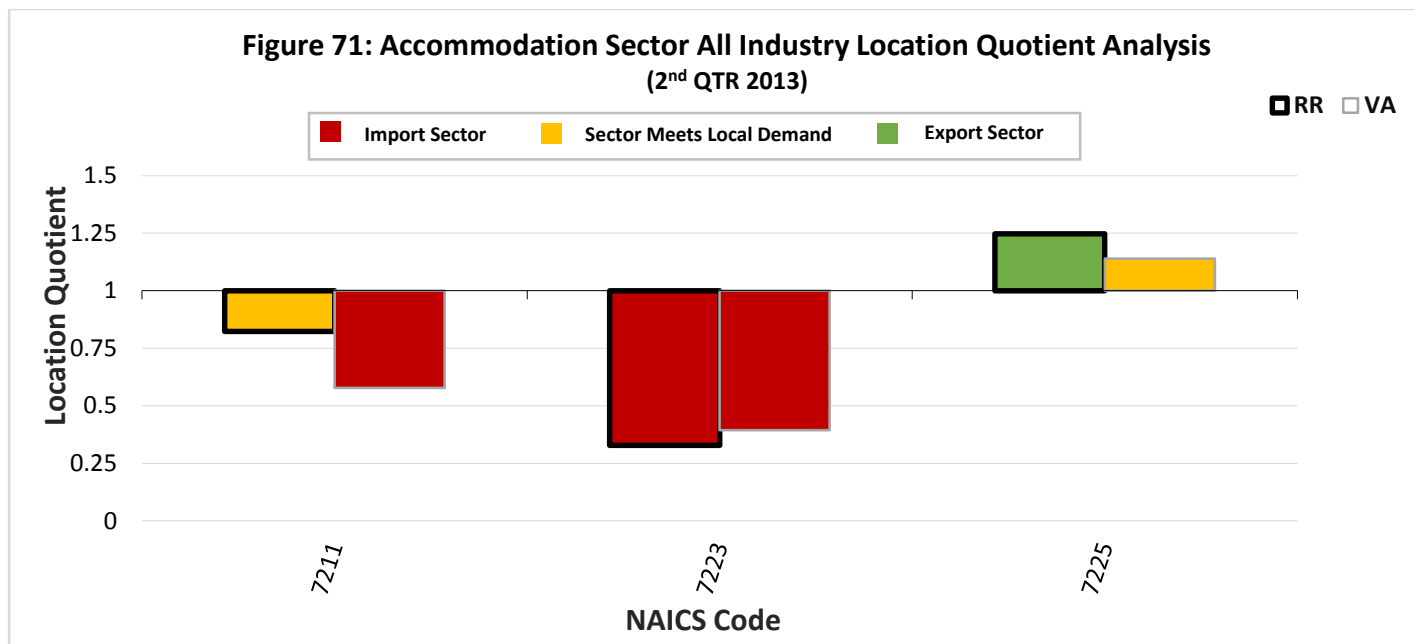
Approximately 90 percent of employment in the Accommodation and Food Services sector in Chesterfield County is concentrated in the Restaurants and Other Eating Places industry group as reported for the second quarter of 2013. However, the highest-paying industry group in this sector was Special Food Services, with an average weekly wage of \$467. This industry group accounted for just over two percent of total sector employment for the quarter.

**Table 49: Accommodation Sector Top 3 Industry Employment 2nd QTR 2013**

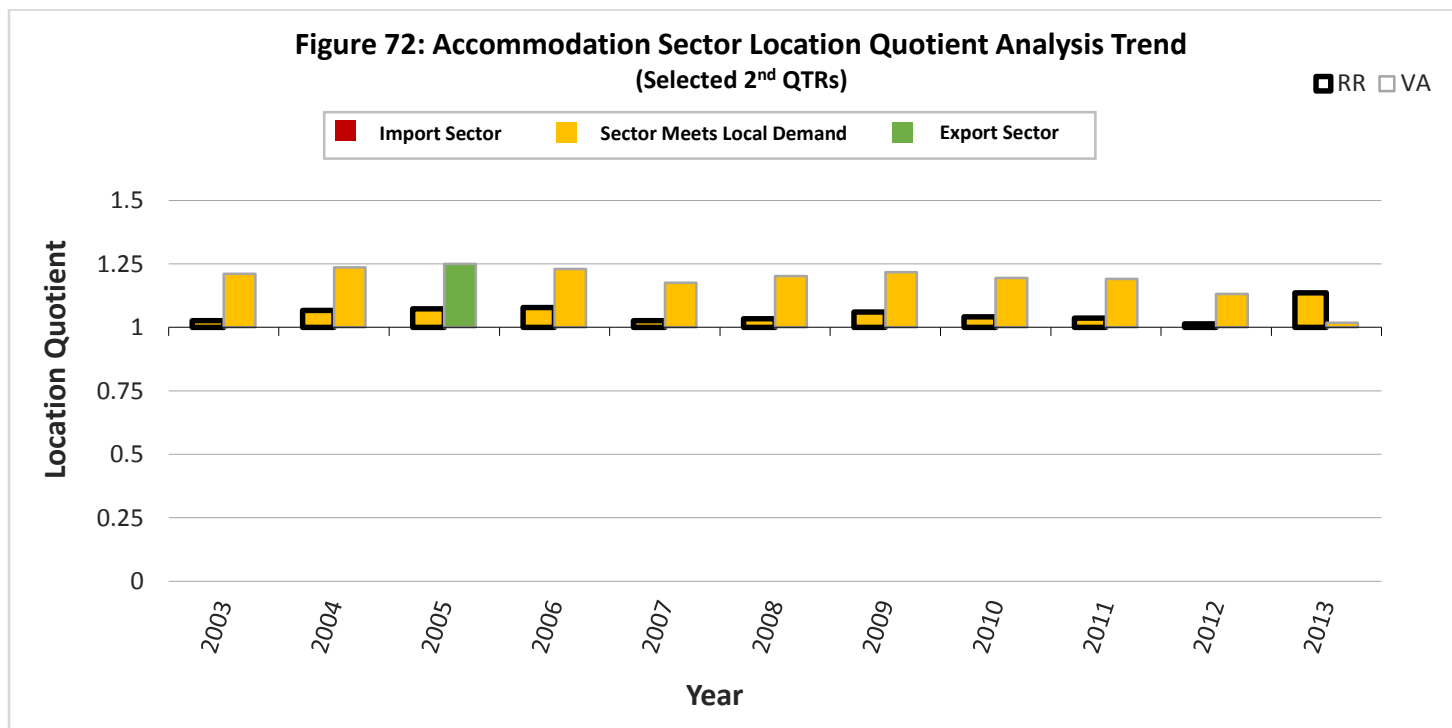
NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
7225	Restaurants and Other Eating Places	10,026	446	\$272
7211	Traveler Accommodation	874	46	\$343
7223	Special Food Services	225	24	\$467

## Location Quotient Analysis

Of the three reportable Accommodation sector industry groups in Chesterfield County, none are considered basic, or exporting compared to both the region and the state. However, the Restaurants and Other Eating Places industry group (NAICS code 7225) has a strong presence for the county at the regional level.



Location quotient analysis of the Accommodation and Food Services sector finds that this industry has been relatively stable since 2003. This sector provides sufficient services to meet the demands of the local population, but is not considered a strong driver of the local economy.



## Shift-Share Analysis

Employment in the Accommodation and Food Services sector grew significantly faster than the overall average of the state economy. If this sector had matched the state overall growth rate for all industries, it would have added 555 jobs over the ten year period from 2003-2013, but instead added 1,468 jobs. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 50: State Growth Share; Accommodation Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Accommodation & Food Services	9,105	+6.09%	+555	+1,468
<i>Countywide</i>			<b>+5,596</b>	<b>+9,060</b>

The Accommodation and Food Services sector remains a competitive industry for Chesterfield County. Local conditions contributed to the gain of 266 jobs in this sector from 2003-2013. Chesterfield overall is a highly competitive jurisdiction within the state, with local conditions contributing 6,776 jobs above the state average from 2003-2013.

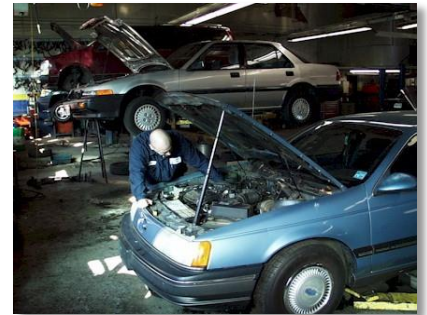
**Table 51: Local Competitive Share; Accommodation Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Accommodation & Food Services	9,105	+22.22%	+19.30%	+266
<i>Countywide</i>				<b>+6,776</b>

## OTHER SERVICES SECTOR

The Other Services sector comprises establishments that provide services not specifically provided for in any other sector. Establishments in this sector are primarily engaged in:

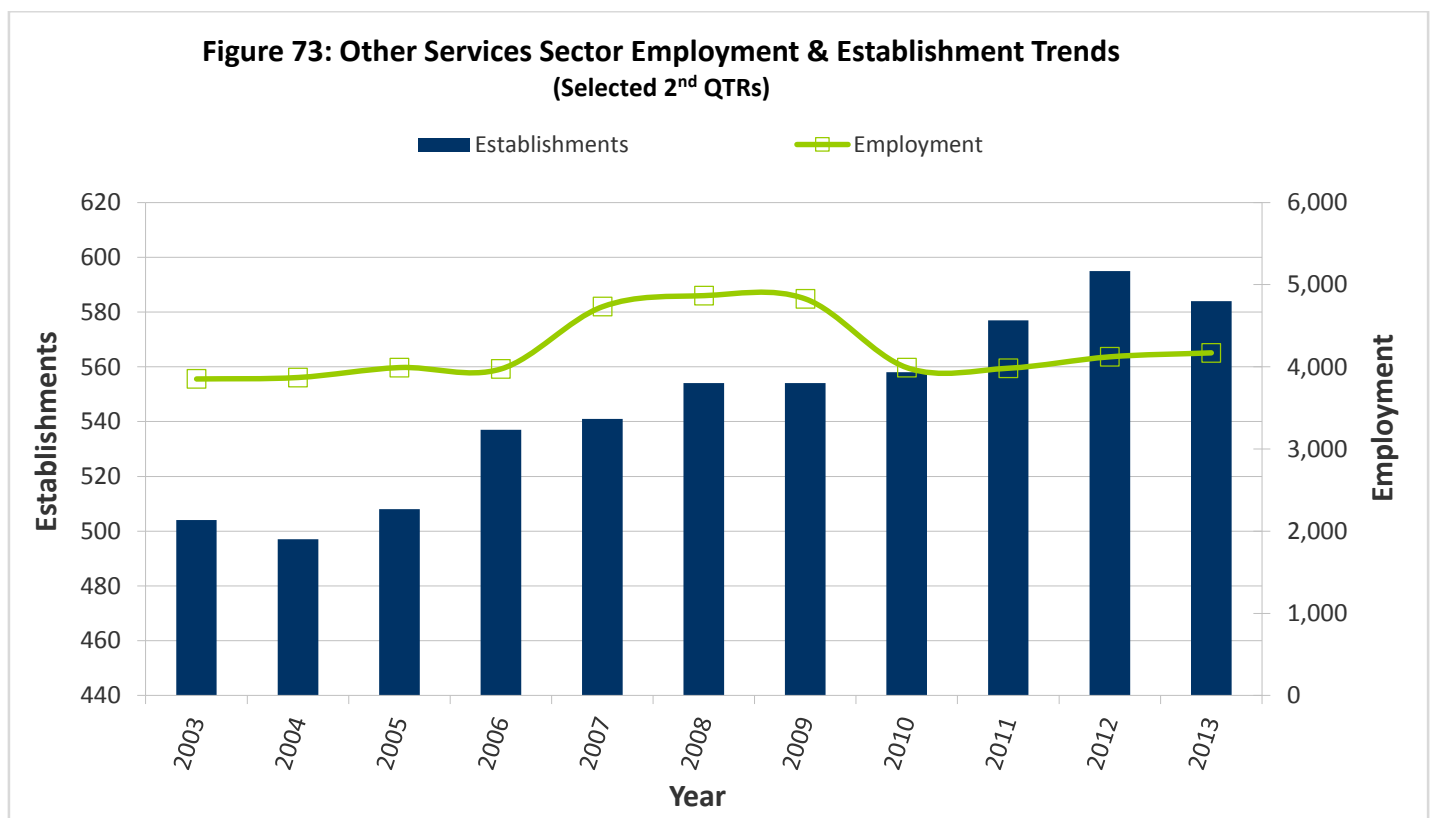
- Repair
- Advocacy
- Personal and pet care services
- Laundry services
- Private households with paid workers providing household operation services



### Sector Trends

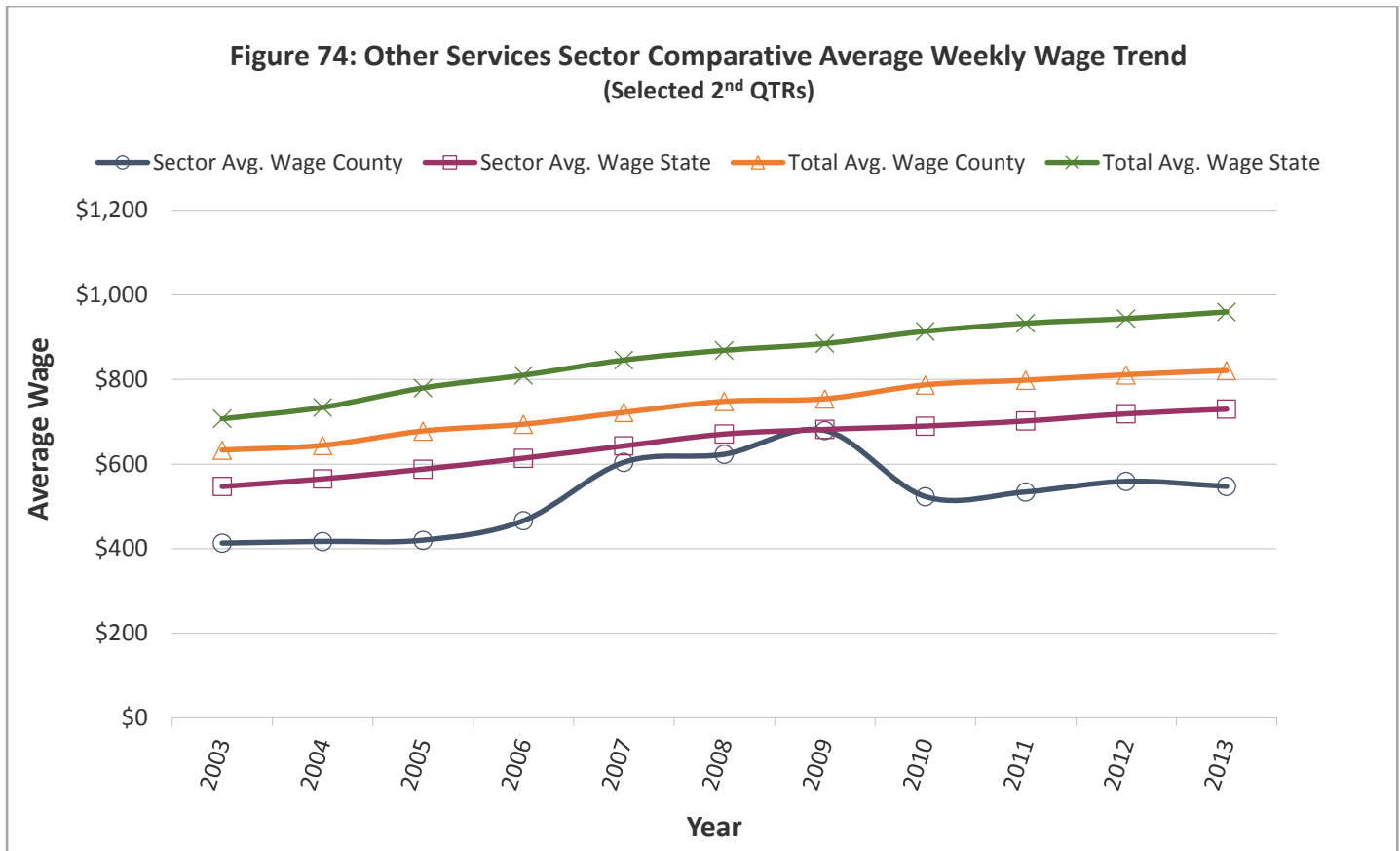
Chesterfield County had 584 establishments (7.7 of the county total) in the Other Services sector as reported for the second quarter of 2013, employing 4,169 persons (4.1 percent of the county total). This represents an increase of 16 percent over 2003 in number of establishments and 8.3 percent over 2003 in employment, or an annual increase of 1.7 percent and 1.3 percent, respectively.

Number of establishments in the Other Services sector have exhibited a steady increasing trend over the ten year period from 2003-2013, with very little fluctuation. Employment, however, exhibited a substantial increase in employment from 2006-2007 (19.1 percent) before declining sharply from 2009-2010 (-17.3 percent). These trends are depicted in further detail in figure 73 below.





The average wage of a worker in the Other Services sector in Chesterfield County was \$547 as reported for the second quarter of 2013, which represents an increase of 32 percent over 2003, or an average annual increase of four percent. The average Virginia wage of a worker in this sector was \$730 in 2003, which represents an increase of 34 percent over 2003, or an average annual increase of 3.3 percent. Chesterfield's total average weekly wage was \$821, an increase of 30 percent over 2003, and Virginia's average weekly wage was \$960, representing an increase of 36 percent over 2003. Wage trends for the information sector are depicted in greater detail in figure 74 below.



## Job Distribution

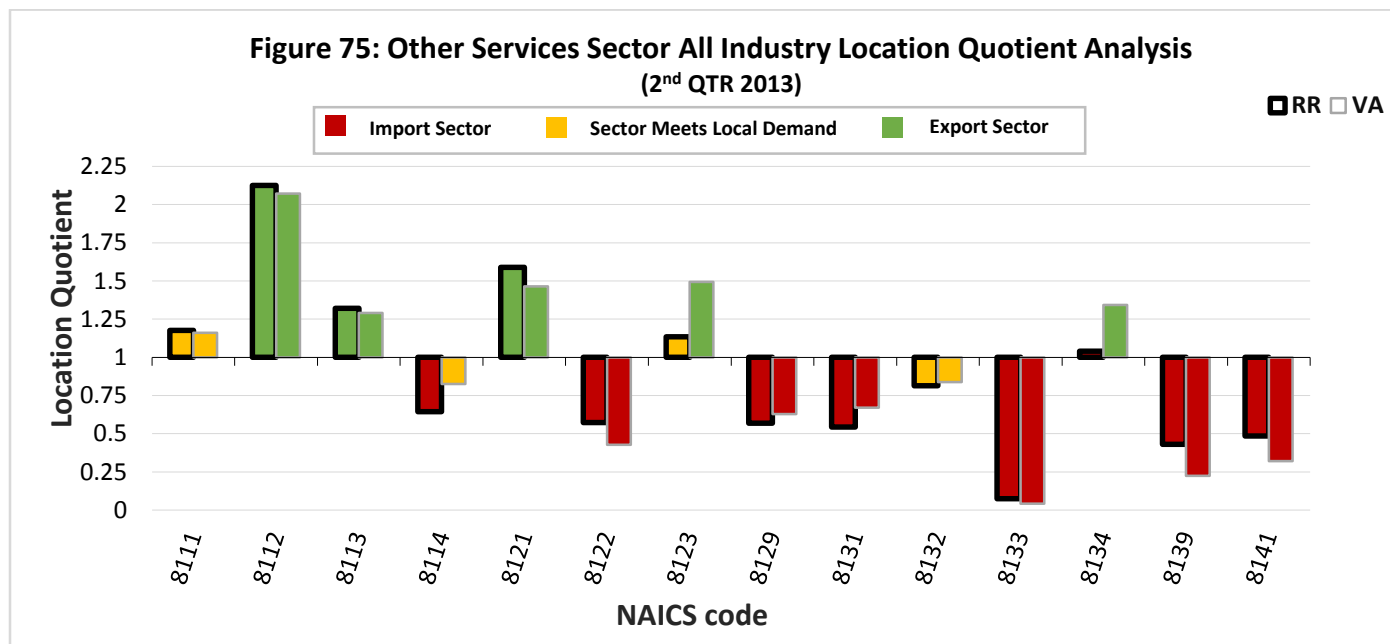
Approximately 25 percent of employment for the Other Services sector was concentrated in the Personal Care Services industry group as reported for the second quarter of 2013. However, the highest average weekly wage for this sector was in the Grantmaking and Giving Services industry group, at \$1,192. This industry group accounted for only three percent of total sector employment.

**Table 52: Other Services Sector Top 5 Industry Employment 2nd QTR 2013**

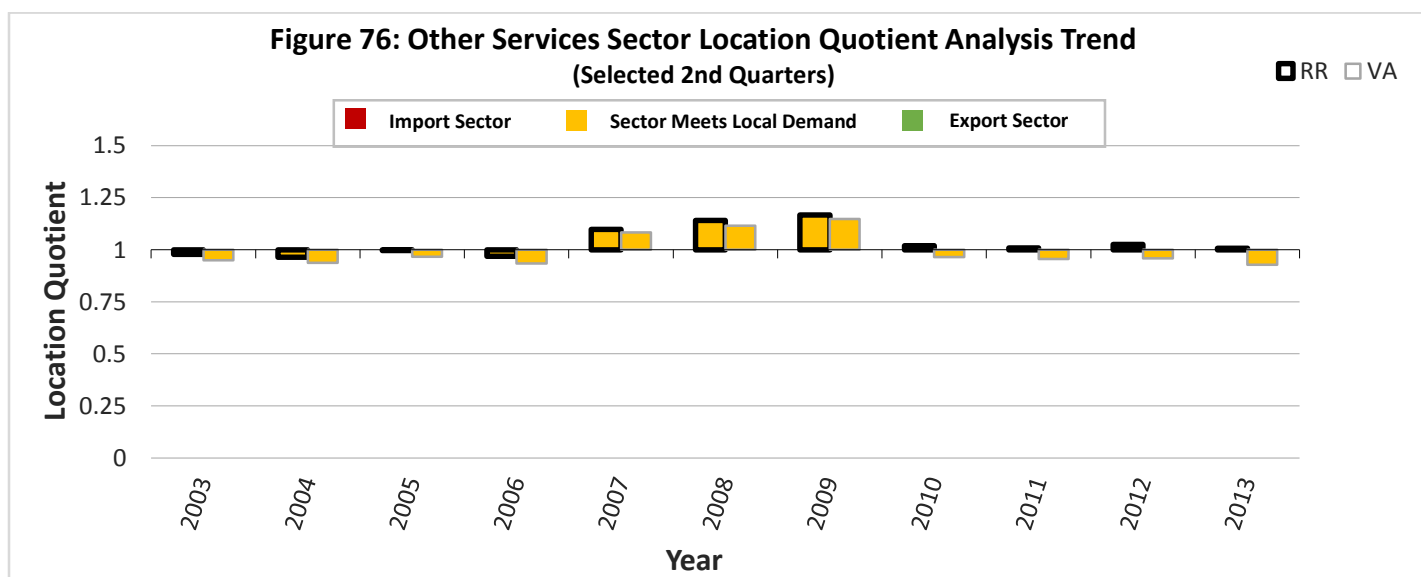
NAICS CODE	INDUSTRY	EMPLOYMENT	ESTABLISHMENTS	AVERAGE WEEKLY WAGE
8121	Personal Care Services	1,033	116	\$438
8111	Automotive Repair and Maintenance	946	134	\$602
8134	Civil and Social Organizations	567	11	\$159
8123	Drycleaning and Laundry Services	460	34	\$558
8139	Business, Professional, Labor, Political, and Similar Organizations	450	40	\$740

## Location Quotient Analysis

Of the 14 reportable Other Services sector industry groups in Chesterfield, three are considered basic, or exporting compared to both the state and the region. Most significantly, the Electronic and Precision Equipment Repair and Maintenance industry group (NAICS code 8112) has an extremely strong presence for the county at both the regional and state levels. The Personal Care Services industry group (NAICS code 8121) and the Commercial and Industrial Machinery and Equipment Repair industry group (NAICS code 8113) are also basic industries for the county. Although not considered basic at the regional level, both the Drycleaning and Laundry Services (NAICS code 8123) and the Civic and Social Organizations (NAICS code 8134) have a strong presence for the county compared to the state level.



The Other Services sector has consistently met local demand over the ten year period, and was particularly strong at both the state and regional levels between 2008 and 2009. Nevertheless, the services provided by this sector have never exceeded local demand to the extent that it could become basic. The sector has been declining since 2010, and reached its lowest point during the second quarter of 2013.



## Shift-Share Analysis

Employment in the Other Services sector in Chesterfield County grew more slowly than the overall average of the state economy. If this sector had matched the state overall growth rate for all industries, it would have added 235 jobs from 2003-2013, but instead gained only 83 jobs during this period. Chesterfield overall added more jobs than would be expected if the county matched the state in its overall growth rate between 2003-2013 by 3,464 jobs.

**Table 53: State Growth Share; Other Services Sector 2003-2013**

SECTOR	2003 COUNTY EMPLOYMENT	STATE OVERALL EMPLOYMENT GROWTH RATE (2003-13)	GROWTH EXPECTED IF SECTOR MATCHED OVERALL JOB GROWTH (2003-13)	ACTUAL CHANGE IN EMPLOYMENT (2003-13)
Other Services	3,581	+6.09%	+235	+83
<i>Countywide</i>			<b>+5,596</b>	<b>+9,060</b>

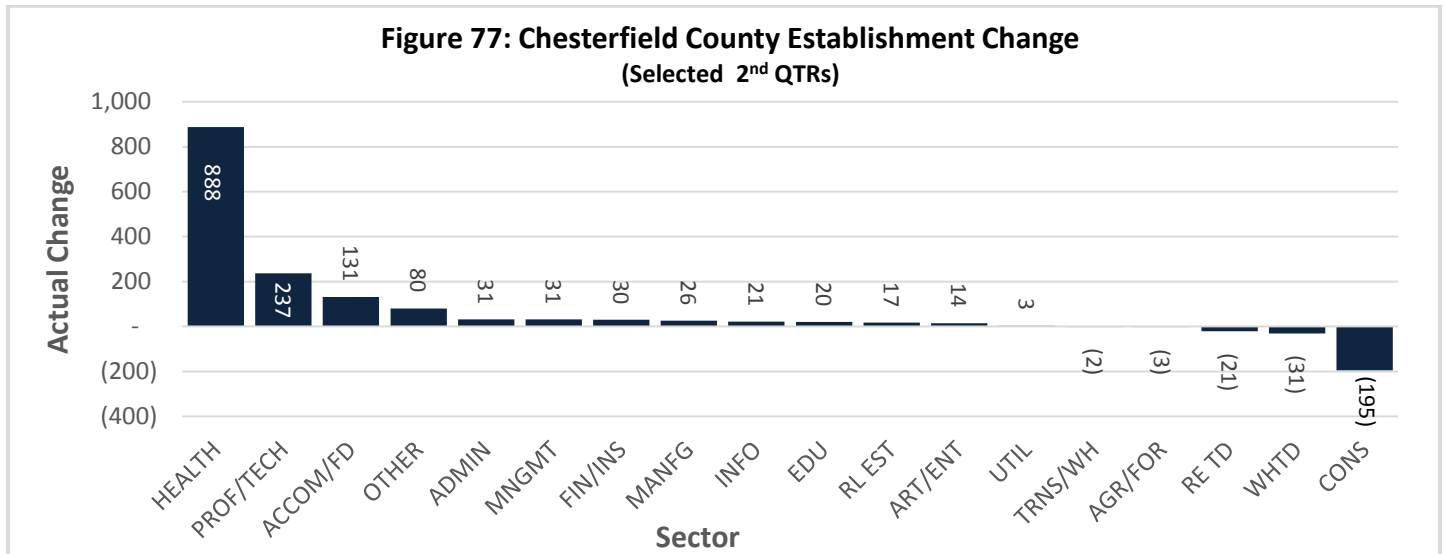
The Other Services sector is a competitive industry in Chesterfield. Local conditions contributed to the gain of 42 jobs in this sector from 2003-2013. Chesterfield overall is a highly competitive jurisdiction within the state, with local conditions contributing 6,776 jobs above that of the state average.

**Table 54: Local Competitive Share; Other Services Sector 2003-2013**

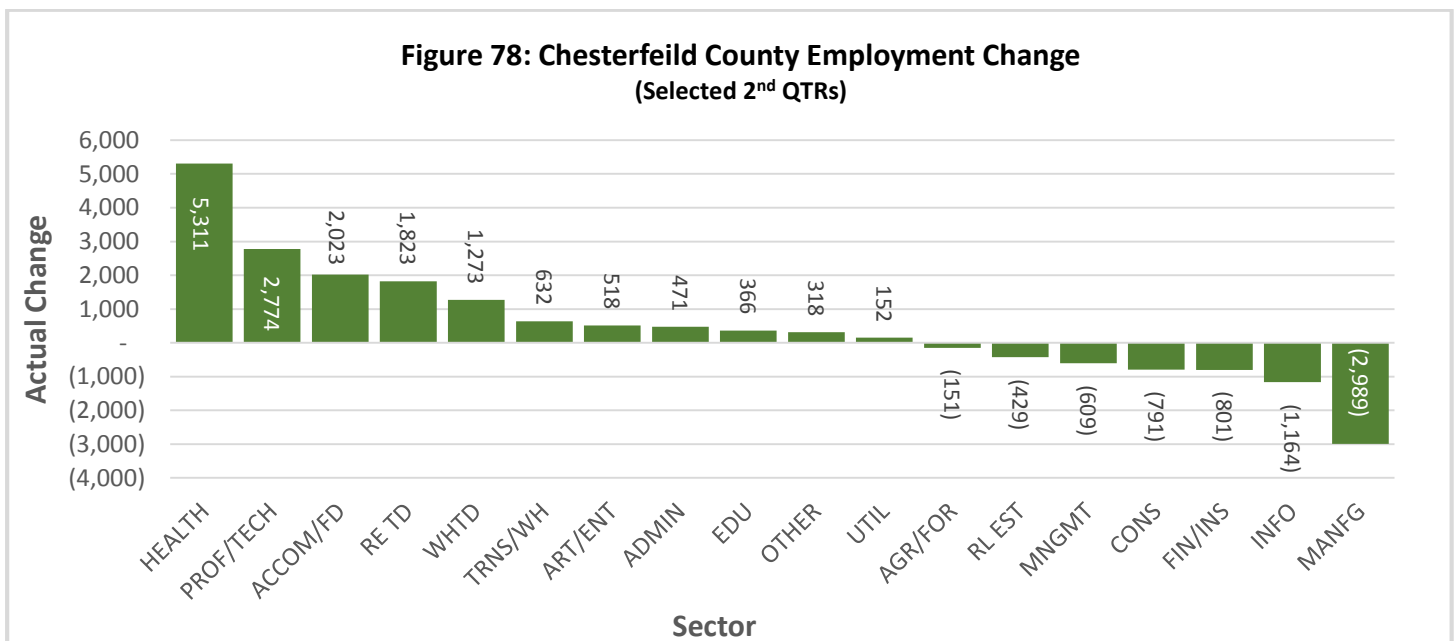
SECTOR	2003 COUNTY EMPLOYMENT	SECTOR'S COUNTY EMPLOYMENT GROWTH RATE (03-13)	SECTOR'S STATE EMPLOYMENT GROWTH RATE (03-13)	LOCAL COMPETITIVE SHARE
Other Services	3,581	+8.26%	+7.17%	+42
<i>Countywide</i>				<b>+6,776</b>

## SUMMARY OF FINDINGS

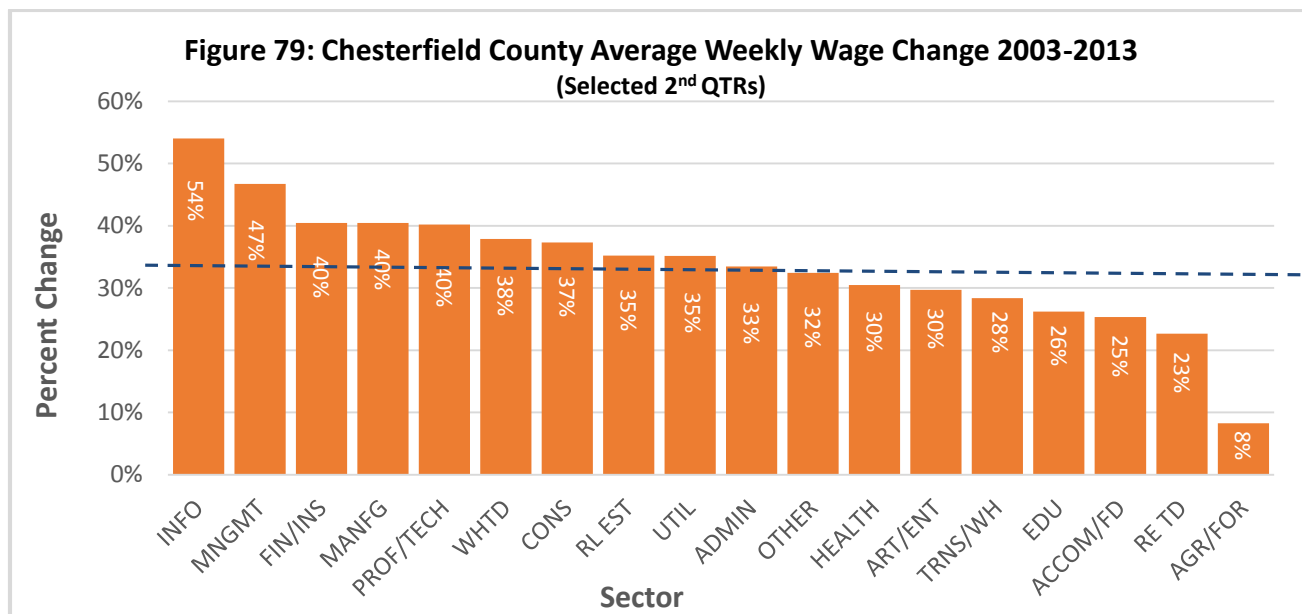
Local conditions within Chesterfield County have fostered a diverse economy which contains businesses within a variety of industries. Further examination of Private sector establishment levels revealed that, of the 18 sectors for which data was available, 12 reported increases in the number of establishments within the county over the ten year period from 2003-2013. Most significantly, the Health Care and Social Assistance sector reported an additional 867 establishments (an increase of 200 percent over 2003). The sector reporting the most significant loss in number of establishments during this period was the Construction sector, which lost 195 establishments from 2003-2013 (a decrease of 19 percent). Ten year establishment changes are depicted in greater detail for each sector in figure 77 below.



Private sector employment levels in Chesterfield County have increased for 11 of the 18 reportable sectors for which data was available over the ten year period from 2003-2013. Most significantly, the Health Care and Social Services sector reported a net increase of 5,311 employees, whereas the Manufacturing sector reported the greatest loss, at a decrease of 2,989 employees. These changes are examined for each sector in detail in figure 78 below.



Over the ten year period from 2003-2013, all sectors in Chesterfield County experienced increases in average weekly wage, with a county average increase of 34 percent for all sectors. The Information sector reported the greatest percentage increase at 54 percent. Figure 79 below depicts these changes in greater detail. The dotted line represents the countywide average wage increase.



**Table 55: Top 15 Chesterfield County Industries by Employment (Private) 2nd QTR 2013<sup>1</sup>**

Rank 2013	Sector	NAICS Code	Industry	Employment	Establishments	Avg. Weekly Wage	Rank 2012
1	ACCOM/FD	7225	Restaurants and Other Eating Places	10,026	446	\$272	1
2	RE TD	4451	Grocery Stores	3,105	62	\$370	2
3	HEALTH	6221	General Medical and Surgical Hospitals	2,580	7	\$1,007	3
4	ADMIN	5613	Employment Services	2,445	58	\$471	4
5	RE TD	4541	Electronic Shopping and Mail-Order	2,267	11	\$461	N/A
6	RE TD	4529	Other General Merchandise Stores	2,206	42	\$424	5
7	ART/ENT	7139	Other Amusement and Recreation Industries	2,155	74	\$255	6
8	HEALTH	6211	Offices of Physicians	2,152	164	\$1,610	8
9	CONS	2382	Building Equipment Contractors	2,121	198	\$896	7
10	RE TD	4411	Automobile Dealers	2,082	64	\$921	9
11	PROF/TECH	5415	Computer Systems Design and Related Services	1,884	205	\$1,884	11
12	ADMIN/WST	5617	Services to Buildings and Dwellings	1,658	206	\$430	14
13	TRANS	4841	General Freight Trucking	1,645	50	\$909	15
14	PROF/TECH	5413	Architectural, Engineering, and Related Services	1,637	139	\$1,422	N/A
15	ADMIN/WST	5614	Business Support Services	1,579	58	\$471	10

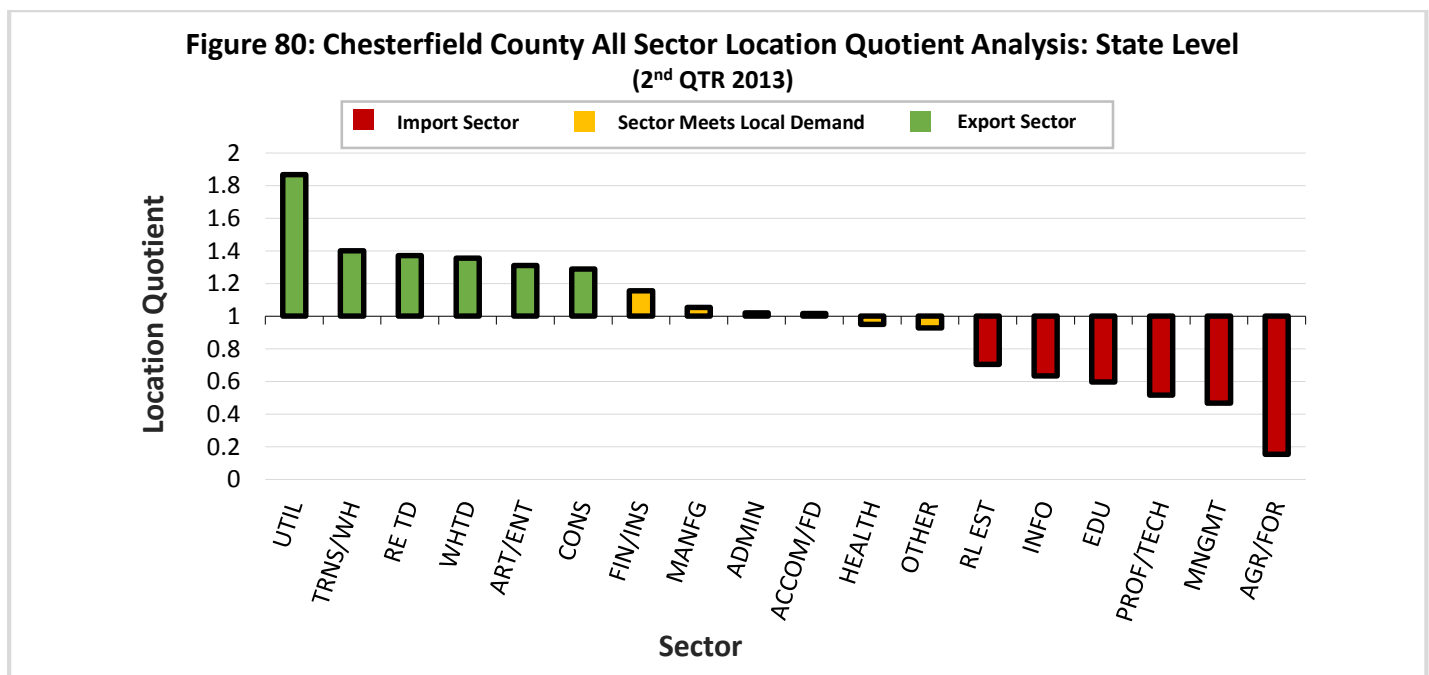
<sup>1</sup> For reportable industries only, some data has been suppressed due to non-disclosure

## Location Quotient Analysis: State Level

Location quotient analysis of Chesterfield County's businesses compared to the state finds that six sectors provide the main 'base' of the local economy: Utilities; Transportation and Warehousing; Arts, Entertainment, and Recreation; Construction; Wholesale Trade; and Retail Trade. These sectors not only meet the needs of the local population, but 'export' goods and services to other areas as well. This county is said to 'specialize' in these sectors.

Several sectors are simply meeting local demand: Finance and Insurance; Manufacturing; Administrative and Waste Services; Accommodation and Food Services; Other Services; Health Care and Social Assistance; and Real Estate and Rental and Leasing.

The remaining sectors are simply not strong enough within the county to meet the demands of the local population, therefore requiring that the goods and services provided by these sectors must be imported from surrounding jurisdictions. These sectors are as follows: Information; Educational Services; Management of Companies and Enterprises; Professional and Technical Services; and Agriculture, Forestry, Fishing, and Hunting. It should be noted, however, that this may not be true of all industries within a particular sector. Furthermore, it is almost certain that at least some of the products produced by 'import' sectors are consumed outside of the locality-just not a significant amount.



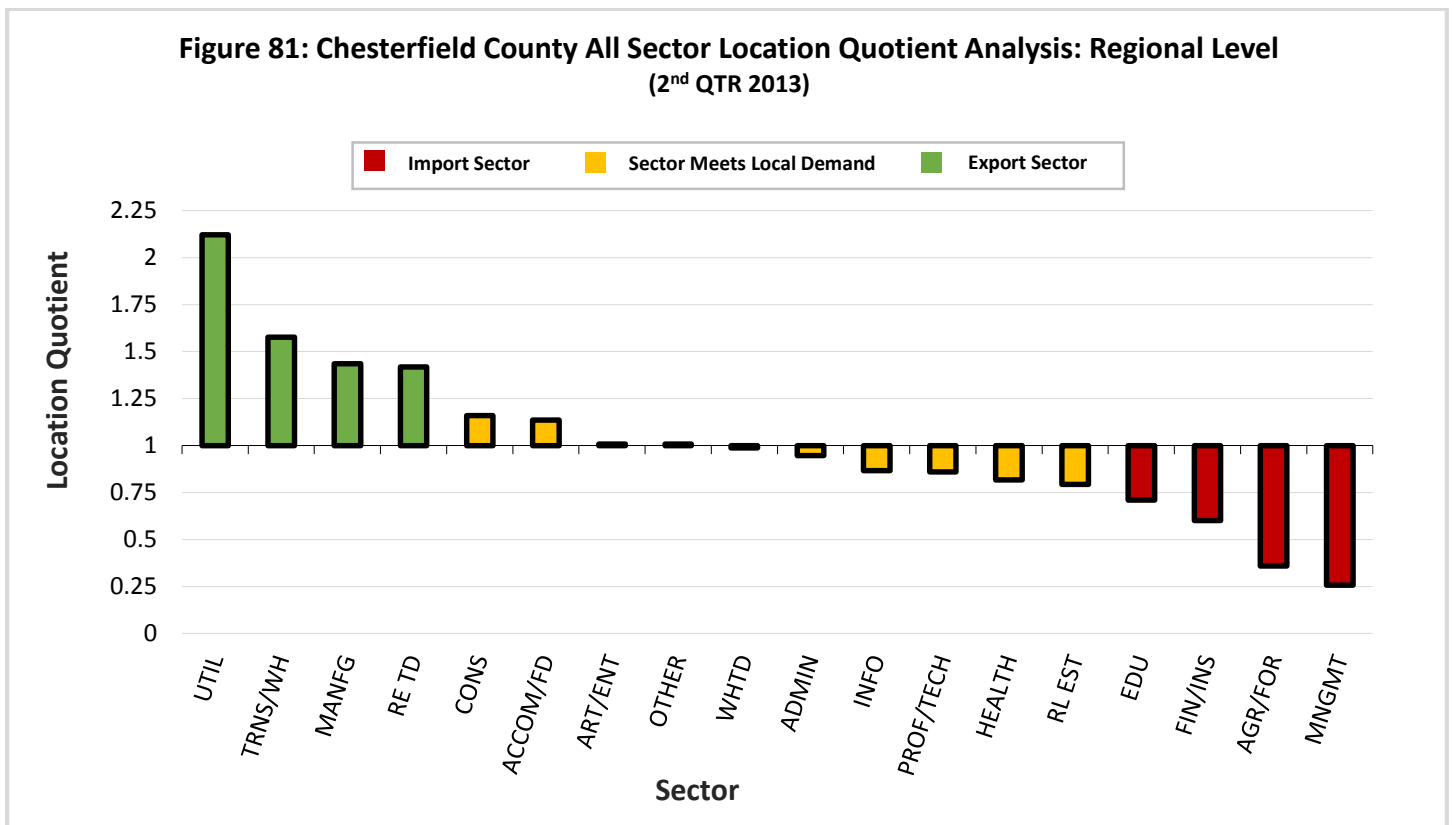


## Location Quotient Analysis: Richmond Region Level

Location quotient analysis of the county's businesses compared to the region finds that four sectors provide the main 'base' of the local economy: Utilities; Transportation and Warehousing; Manufacturing; and Retail Trade. These sectors not only meet the needs of the local population, but 'export' goods and services to other areas as well. The county is said to 'specialize' in these sectors.

At the regional level, the majority of sectors are simply meeting the demands of the local population: Construction; Accommodation and Food Services; Arts, Entertainment, and Recreation; Other Services; Administrative and Waste Services; Wholesale Trade; Information; Real Estate; Professional and Technical Services; and Health Care and Social Assistance.

The remaining sectors are not strong enough within the county to meet the demands of even the local population as compared to the region, and as a result, goods and services provided by these sectors must be imported from surrounding jurisdictions. These sectors are as follows: Educational Services; Finance and Insurance; Agriculture, Forestry, Fishing, and Hunting; and Management of Companies and Enterprises. It should be noted, however, that this may not be true of all industries within a particular sector. In addition, it is almost certain that at least some of the products of these 'import' sectors are consumed outside of the locality—just not a significant amount.

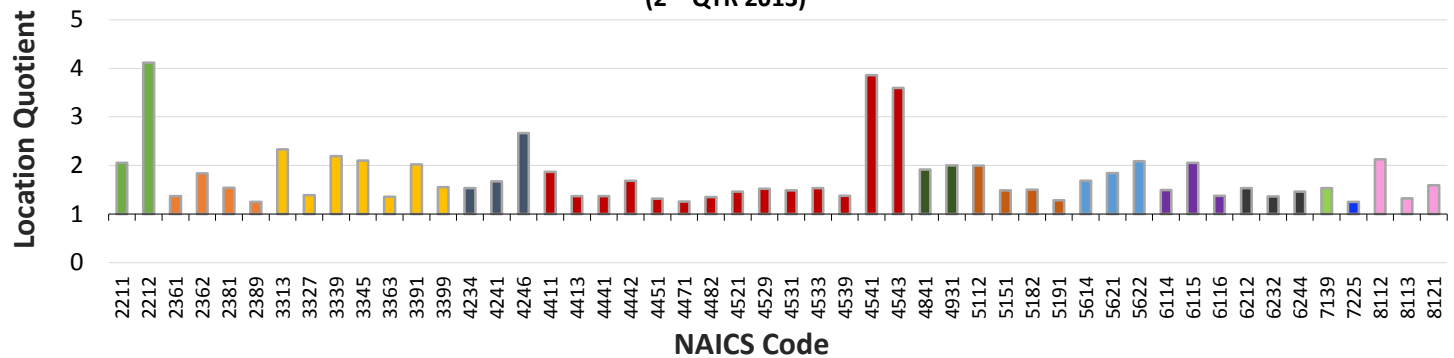


The figure below depicts the 50 industrial groups (NAICS 4-digit) that make up the county's economic base, meaning they have a location quotient greater than or equal to 1.25 within the Richmond region. Again, the industries represented are only those for which data was available during the second quarter of 2013. Approximately 22 percent of the county's basic industrial groups lie in the Retail Trade sector. However, the chart clearly shows that the county's economic base is made up of a wide range of industries.

**Figure 82: Richmond Region Location Quotients: Industrial Groups of Chesterfield's**

**Economic Base**

(2<sup>nd</sup> QTR 2013)



UTILITIES	MANUFACTURING	RETAIL TRADE		ADMIN/WASTE	HEALTH	ACCOM/FOOD
CONSTRUCTION	WHOLESALE TRADE	TRANSPORTATION	INFORMATION	EDUCATION	ART/ENTERTAINMENT	OTHER

- |          |  |          |   |
|----------|--|----------|---|
| 1. 2212  | Natural Gas Distribution                                 | 27. 6212 | Offices of Dentists   |
| 2. 4541  | Electronic Shopping and Mail-Order                       | 28. 4234 | Professional and Commercial Equipment and Suppliers Wholesalers |
| 3. 4543  | Direct Selling Establishments                            | 29. 4529 | Other General Merchandise Stores                                |
| 4. 4246  | Chemical Merchant Wholesalers                            | 30. 5182 | Data Processing, Hosting and Related Service                    |
| 5. 3313  | Alumina and Aluminum Production and Processing           | 31. 6114 | Business Schools and Computer Management                        |
| 6. 3339  | Other General Purpose Machinery Manufacturing            | 32. 5151 | Radio and Television Broadcasting                               |
| 7. 8112  | Electronic Equipment Repair/Maintenance                  | 33. 4531 | Florists  |
| 8. 3345  | Electronic Instrument Mfg                                | 34. 6244 | Child Day Care Services   |
| 9. 5622  | Waste Treatment and Disposal                             | 35. 4521 | Department Stores   |
| 10. 2211 | Electric Power Generation, Transmission and Distribution | 36. 3327 | Machine Shops; Turned Product; and Screw, Nut and Bolt Mfg      |
| 11. 6115 | Technical and Trade Schools                              | 37. 4539 | Other Misc. Stores  |
| 12. 3391 | Medical Equipment and Supplies                           | 38. 6116 | Other Schools and Instruction                                   |
| 13. 4931 | Warehousing and Storage                                  | 39. 4413 | Auto Parts, Accessories, and Tire                               |
| 14. 5112 | Software Publishers                                      | 40. 2361 | Residential Building Construction                               |
| 15. 4841 | General Freight Trucking                                 | 41. 4441 | Building Material and Supplies                                  |
| 16. 4411 | Automobile Dealers                                       | 42. 6232 | Residential Mental Health Facilities                            |
| 17. 5621 | Waste Collection   | 43. 3363 | Motor Vehicle Parts Mfg   |
| 18. 2362 | Nonresidential Building Construction                     | 44. 4482 | Shoe Stores   |
| 19. 5614 | Business Support Services                                | 45. 8113 | Commercial and Industrial Machinery and Equipment               |
| 20. 4442 | Lawn and Garden Equipment/Supplies                       | 46. 4451 | Grocery Stores  |
| 21. 4241 | Paper/Paper Product Merchant Wholesalers                 | 47. 5191 | Other Information Services                                      |
| 22. 8121 | Personal Care Services                                   | 48. 4471 | Gasoline Stations   |
| 23. 3399 | Other Misc. Manufacturing                                | 49. 2389 | Other Specialty Trade Contractors                               |
| 24. 2381 | Foundation, Structure, and Building Exterior             | 50. 7225 | Restaurants and Other Eating Places                             |
| 25. 4533 | Used Merchandise Stores                                  |          |   |
| 26. 7139 | Other Amusement and Recreation Industries                |          |   |

## Shift-Share Analysis: Chesterfield County All Sector State Growth Share

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The state growth share portion of the shift-share analysis indicates the degree to which sectoral changes in employment levels deviate from fluctuations that would be expected had employment changed at the same pace as the state average for all industries. Had employment in Chesterfield County grown at the same pace as all industries at the state level, the county would have lost 5,596 jobs, but instead added 9,060, a positive difference of 3,464 jobs. As depicted in the table on the following page, the following sectors grew faster than would be expected based upon the state average growth rate:

- Accommodation & Food Services
- Arts, Entertainment & Recreation
- Educational Services
- Health Care & Social Assistance
- Professional, Scientific & Technical Services

It is equally important to indicate sectors which are declining faster than the state average, as such sectors could potentially threaten the overall economic competitiveness of a given locality. Employment growth rate for the following sectors was well below that of the state average:

- Agriculture, Forestry, Fishing & Hunting
- Construction
- Finance & Insurance
- Information
- Manufacturing
- Management of Companies & Enterprises
- Real Estate & Rental & Leasing

**Table 56: Chesterfield County All Sector State Growth Share (2<sup>nd</sup> QTR 2013)**

NAICS Sector	2003 County Employment	State Overall Growth Rate	Growth Expected	Actual Employment Change
Accommodation	9,105	+6.09 %	555	1,468
Administrative	6,844		417	54
Agriculture	214		13	(164)
Art & Entertainment	1,903		116	402
Construction	8,611		524	(1,315)
Education	906		55	311
Finance & Insurance	5,871		358	(1,159)
Health	7,260		442	5,229
Information	2,701		165	(1,329)
Manufacturing	11,274		687	(3,676)
Management	1,822		111	(720)
Other	3,851		235	83
Professional	4,195		255	2,519
Retail Trade	17,167		1,046	777
Real Estate	1,673		102	(531)
Transportation	4,034		246	386
Utilities	515		31	121
Wholesale Trade	3,877		236	1,037
County State Growth Share			+5,596	+9,060

## Shift-Share Analysis: Chesterfield County All Sector Industrial Mix Share

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The next step in shift-share analysis is to measure the county's industrial mix share, which represents how the county's unique mix of industries has accounted for employment change. A positive result of this portion of the analysis indicates that employment in the county is concentrated in high-growth sectors at the state level. Alternatively, a negative result indicates that employment within the county is concentrated in industries which are declining at the state level.

Employment within the county is concentrated in declining or slow-growth sectors, as outlined in the table on the following page. As a result, Chesterfield has 3,281 jobs less than it would have if its industrial mix was the same as the state average. That being said, the following sectors are growing faster than would be expected had they mirrored state growth levels:

- Accommodation & Food Services
- Administrative, Support & Waste Management Services
- Arts, Entertainment & Recreation
- Educational Services
- Health Care & Social Assistance
- Management of Companies & Enterprises
- Other Services
- Professional, Scientific & Technical Services

Most significantly, the Health Care & Social Assistance sector added 2,045 more jobs than predicted based upon the sector's state growth rate. The most significant deficit occurred in the Manufacturing sector, and resulted in 3,446 fewer jobs than would be expected had this sector mirrored changes occurring at the state level.

**Table 57: Chesterfield County Industrial Mix Share (2<sup>nd</sup> QTR 2013)**

NAICS Sector	2003 County Employment	State Overall Growth Rate	Sector's State Growth Rate	Industrial Mix Share
Accommodation	9,105	+6.09 %	19.30%	1,203
Administrative	6,844		8.22%	145
Agriculture	214		-4.15%	-22
Art & Entertainment	1,903		15.05%	171
Construction	8,611		-18.02%	-2,077
Education	906		35.90%	270
Finance & Insurance	5,871		-0.57%	-391
Health	7,260		34.26%	2,045
Information	2,701		-28.71%	-940
Manufacturing	11,274		-24.48%	-3,446
Management	1,822		10.82%	86
Other	3,851		7.17%	42
Professional	4,195		37.16%	1,303
Retail Trade	17,167		2.22%	-665
Real Estate	1,673		-7.40%	-226
Transportation	4,034		-2.76%	-357
Utilities	515		-11.76%	-92
Wholesale Trade	3,877		-2.45%	-331
County State Growth Share				-3,281

## Shift-Share Analysis: Chesterfield County All Sector Local Competitive Share

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The final state of the analysis examines the local competitive share, which is the degree to which the local business climate has influenced either the decline or growth of employment overall, independent of fluctuations at the state level. Put simply, this portion of the analysis determines how competitive the local business environment is at the state level. Since a number of factors interact to contribute to local business conditions, it is impossible to definitively attribute the competitive advantage (or disadvantage) of the locality to any single factor. The table on the following page outlines the county results of this portion of the analysis.

Local business conditions provided a competitive advantage for the following sectors in Chesterfield County:

- Accommodation & Food Services
- Arts & Entertainment
- Construction
- Educational Services
- Health Care & Social Assistance
- Other Services
- Professional, Scientific & Technical Services
- Retail Trade
- Transportation & Warehousing
- Utilities
- Wholesale Trade

Despite the fact that the industrial mix share analysis indicated that much of the county's employment is concentrated in slow-growth or declining sectors as predicated by fluctuations at the state level, the overall competitiveness of the county's business climate contributed to the creation of 6,776 jobs during the 2003-2013 period.

**Table 58: Chesterfield County Local Competitive Share (2<sup>nd</sup> QTR 2013)**

NAICS Sector	2003 County Employment	State Overall Growth Rate	Sector's County Growth Rate	Local Competitive Share
Accommodation	9,105	+6.09 %	22.22%	266
Administrative	6,844		6.88%	-91
Agriculture	214		-70.56%	-142
Art & Entertainment	1,903		27.22%	232
Construction	8,611		-9.19%	761
Education	906		40.40%	41
Finance & Insurance	5,871		-13.64%	-767
Health	7,260		78.11%	3,184
Information	2,701		-43.10%	-388
Manufacturing	11,274		-26.51%	-230
Management	1,822		-33.42%	-806
Other	3,851		8.26%	42
Professional	4,195		66.13%	1,215
Retail Trade	17,167		10.62%	1,442
Real Estate	1,673		-25.64%	-305
Transportation	4,034		15.67%	743
Utilities	515		29.51%	213
Wholesale Trade	3,877		32.83%	1,368
County Local Competitive Share				+6,776



## Summary

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Based upon the results of both the shift-share and location quotient analyses, local conditions in Chesterfield County have fostered a competitive environment for the following sectors at both the regional and state levels:

- Retail Trade
- Transportation and Warehousing
- Utilities

According to the results of the shift-share analysis, local conditions in Chesterfield County have resulted in a highly competitive environment for the following sectors:

- Accommodation & Food Services
- Arts & Entertainment
- Educational Services
- Health Care & Social Assistance
- Professional & Technical Services

There were several sectors displaying interesting trends when the results of the shift-share and location quotient analyses were compared. The Manufacturing Sector, for example, exhibited declining employment due to local conditions as indicated by the results of the shift-share analysis, yet continues to be an exporting sector at the regional level according to the location quotient analysis. This information indicates that the increased automation of this sector has had a negative impact on employment levels while increasing productivity to the extent that the sector's production levels exceed local demand.

Despite competitive local conditions for the Health Care and Social Assistance sector, the location quotient analysis indicated that this sector remains less competitive in Chesterfield County than at the regional and state levels. The location quotient analysis for the Educational Services sector indicated that this sector is weaker within the county than at the regional and state levels, however it should be noted that this analysis only takes private sector industries into account. Within the Educational Services sector, this means that those services being represented are intended to supplement the public school system. While Chesterfield County is home to technical and trade schools which serve as exporters to surrounding jurisdictions, the strength of the county's public school system results in lower employment levels in supplemental services.

Overall, Chesterfield County is a highly competitive jurisdiction at both the regional and state levels. Local conditions within the county have led to competitive employment levels, despite the impact that the recession had nationwide. Most notably, the Construction sector maintained higher-than average employment levels within the county throughout the recession. Through the consideration of the results indicated in this report, Chesterfield can continue to enhance its competitive advantage at both the regional and state levels.

## DATA SOURCES AND METHODOLOGY

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### **Virginia Workforce Connection:**

[www.vawc.virginia.gov](http://www.vawc.virginia.gov)

- employment figures
- wage figures
- top employers

### **North American Industrial Classification System (NAICS) Desk Aid, United States 2002**

- NAICS code structure, industry identification

### **United States Census Bureau:**

[www.census.gov](http://www.census.gov)

- NAICS sector level definitions and descriptions

### **Pennsylvania State University, College of Agricultural Sciences**

[www.cas.psu.edu](http://www.cas.psu.edu)

“Understanding Economic Change in Your Community”, Pennsylvania State University, 2003. (Shift-Share Analysis descriptions).

### **List of Abbreviations:**

AGR/FOR: Agricultural, Forestry, Fishing, and Hunting Sector

UTIL: Utilities Sector

CONS: Construction Sector

MANFG: Manufacturing Sector

WH TD: Wholesale Trade Sector

RE TD: Retail Trade Sector

TRNS/WH: Transportation and Warehousing Sector

INFO: Information Sector

FIN/INS: Finance and Insurance Sector

RL EST: Real Estate and Rental and Leasing Sector

PROF/TECH: Professional, Scientific, and Technical Services Sector

MNGMT: Management of Companies and Enterprises Sector

ADMIN/WST: Administrative and Support and Waste Management and Remediation Services Sector

EDU: Educational Services

HEALTH: Health Care and Social Assistance Sector

ART/ENT: Arts, Entertainment, and Recreation Sector

ACCOM/FD: Accommodation and Food Services Sector

OTHER: Other Services (except Public Administration) Sector

### Top Industries by Employment (Private)

This section of the report utilized the 4-digit industry group level data from NAICS when available. Industries at this level that have less than three establishments, or where a single business comprises 80 percent of that industry's employment, are not reported. All data in this report is for private enterprises; federal, state, and local firms are not included in this report.

### NAICS Structure

First 2 Digits:	Sector	51 Information
Third Digit:	Sub-Sector	515 Broadcasting, Except Internet
Fourth Digit:	Industry Group	5151 Radio and Television Broadcasting
Fifth Digit:	NAICS Industry	51511 Radio Broadcasting
Sixth Digit:	U.S. Industry	515111 Radio Networks

### Location Quotients

Location quotient analysis is but one way of measuring a local economy. This analysis reveals how strong a particular sector is through its employment relative to the county as a whole. This is directly compared to the same measurement at the state level (the national level can be used as well). These two percentages are then divided against each other. The result will show that: 1) the local economy has a higher percentage of workers in a particular industry than the state average, or; 2) the local economy has roughly the same percentage of workers in a particular industry compared to the state, or; 3) the locality has less workers employed in a particular industry than the state average. The number '1' represents a percentage equal to the state, with a value above '1' meaning the local economy has 'extra' workers in a given sector. For this report, a value greater than 1.25 defines a basic industry, a value between 0.75 and 1.25 an industry that meets the local demand, and below 0.75 are industries where demand is met mainly by businesses outside of the locality (non-basic). A basic industry is taken to mean that this industry must be providing at least some of its goods and/or services to populations outside of the local economy, and bringing those outside sales dollars back into the county, providing the base of the local economy. Non-basic industries are not strong enough to even supply the local population, and that at least a portion of the goods and/or services from these industries must be provided to the local population by sources and businesses outside of the locality. Thus, these industries must 'import' goods and/or services to serve the local population.

### Shift-Share Analysis

This analysis attempts to account for the changes in a sector's employment over a given time. The technique distributes the employment change among three contributing factors: change attributable to growth of the state economy; change attributable to the local economy's mix of faster or slower than average growing industries (compared to the state); and change due to the competitiveness of the local industries. The analysis compares the local economy with the state economy, to determine whether the local economy has witnessed a faster or slower change in employment than the state economy has observed. This tool is descriptive, not diagnostic, of the change in local employment, it does not answer the question *why?*.

### For More Information

Any questions regarding the information found in this report, or about the report itself, can be answered by Steven Haasch in the Comprehensive Planning & Research Team of the Chesterfield County Planning Department by calling (804) 796-7192, or through email at [haaschs@chesterfield.gov](mailto:haaschs@chesterfield.gov).

